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**WATERTOWN ARSENAL
LABORATORY**

EXPERIMENTAL REPORT

NO. WAL. 640/157

WELDING OF ARMOR

Summary of Ballistic Shock Test Results for
1/2, 3/8, 5/16 and 1/4 Inch Homogeneous Armor "H" Plates
Welded with Austenitic Electrodes and Tested at
Aberdeen Proving Ground during the Period of
1 April 1943 through 31 March 1944

BY

C. L. Norcross
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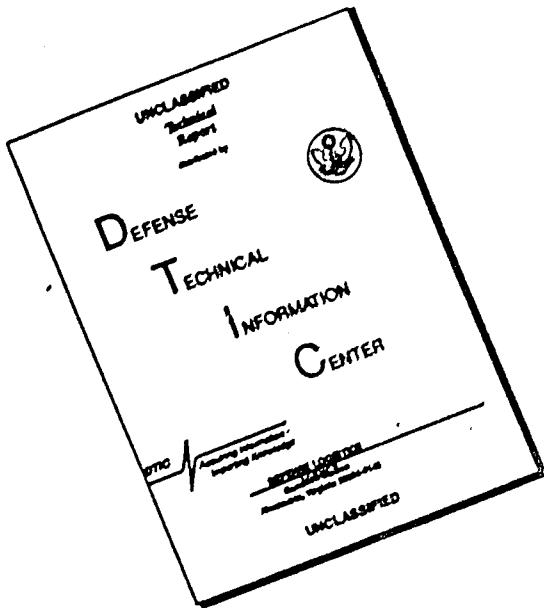
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~~██████████~~ Herres/drj

7 August 1943

Laboratory (SAM)

Subject: Watertown Arsenal Laboratory Report No. VAL 640/157

To: Chief of Ordnance, ASF
Pentagon Building
Washington 25, D. C.

Attn: SPOTX - Technical Reports & Reference Section

1. Inclosed herewith are seven (7) copies of Watertown Arsenal Laboratory Report No. VAL 640/157, entitled "Welding of Armor - Summary of Ballistic Shock Test Results for 1/2, 3/8, 5/16 and 1/4 inch Homogeneous Armor 'H' Plates Welded with Austenitic Electrodes and Tested at Aberdeen Proving Ground during the Period of 1 April 1943 through 31 March 1944".

2. These reports are for distribution as follows:

3 copies - SPOTX, Technical Reports & Reference Section
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3. Copies of this report have been sent to the following:

Office, Chief of Ordnance-Detroit
Rock Island Arsenal
Ordnance Research & Development Center, Aberdeen Proving
Ground, Maryland

4. This report covers tabulation and summary of data from Aberdeen Proving Ground firing records for 309 welded armor "H" plates. With the exception of an experimental .45% C, .90% Mn armor plate which showed excessive plate cracking, no correlation is evident between chemical composition of the armor plate and ballistic performance. Steel quality (cleanliness and directional properties) appears to affect the amount of both plate and weld cracking. No single joint design or welding procedure variable was indicated as affecting the ballistic cracking significantly.

For the Commanding Officer:

N. A. MATTHEWS
Lt. Col., Ord. Dept.
Assistant

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Watertown Arsenal Laboratory
Report Number WAL 640/157
Problem Number D-13.3

15 February 1945

WELDING OF ARMOR

Summary of Ballistic Shock Test Results for
1/2, 3/8, 5/16 and 1/4 Inch Homogeneous Armor "H" Plates
Welded with Austenitic Electrodes and Tested at
Aberdeen Proving Ground during the Period of
1 April 1943 through 31 March 1944.

OBJECT

To tabulate firing record data for subject plates and to present a comparison of ballistic shock performance of plates made with various materials and welding procedures.

SUMMARY

1. Data from Aberdeen Proving Ground firing records for 309 welded armor "H" plates have been tabulated on the accompanying charts and tables.
2. With the exception of an experimental .45% C, .90% Mn armor plate which showed excessive plate cracking, no correlation is evident between chemical composition of the armor plate and ballistic performance. Steel quality (cleanliness and directional properties) appears to affect the amount of both plate and weld cracking.
3. No single joint design or welding procedure variable was indicated as affecting the ballistic cracking significantly.

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INTRODUCTION

This is the ninth of a series of reports presenting tabulations of ballistic shock test results and welding procedure variables for "H" plates welded by commercial fabricators. A previous report (WAL 640/90) dealt with "H" plates of 1/2, 3/8, and 1/4 inch thickness which were welded with austenitic electrodes and tested at Aberdeen Proving Ground during the period of 1 October 1942 through 31 March 1943. The present tabulation includes all firing records received by this arsenal for "H" plates of 1/2, 3/8, 5/16, and 1/4 inch thick rolled homogeneous armor which were welded with austenitic electrodes and tested at Aberdeen Proving Ground between 1 April 1943 and 1 April 1944.

Data from 309 firing records (161 - 1/2", 67 - 3/8", 9 - 5/16", and 72 - 1/4") are tabulated in the charts of Appendix A. An index of fabricators, armor manufacturers, and electrode manufacturers is given in Table I. A summary of current ballistic shock test specification requirements and a key to tabulation methods and symbols used in this report are included in Appendix A.

GENERAL COMMENTS

For the purpose of this report all cracking in weld or plate metal within 1/8 inch of the edge of weld is included as weld cracking and the remainder as plate cracking. Table II shows the average plate and weld cracking in terms of variations in the conditions of ballistic testing, but the results do not provide a basis for correction or allowances for variation in number or velocity of impacts on any one test plate. If the distance from the center of impact to the center of weld is greater than 1-3/4 inches for tests made with the 37 mm. H.E. projectile, the impact is not considered as a fair test of the weld.

However a considerable amount of cracking was caused by unfair rounds, and therefore all rounds are included in calculating average weld and plate cracking, but the number of rounds outside specification limits for velocity and location are listed and may be taken into consideration in comparing effects of armor and welding variables.

There follows a summary discussion based on comparisons of average cracking per round for all plates in this tabulation in terms of welding fabricator, armor manufacturer and processing, electrode, joint design, welding procedure, and radiographic soundness data.

Fabricators - Table III

The performance of "H" plates welded by any one fabricator is dependent upon armor and electrodes used as well as welding procedure and inspection control.

Armor Data - Table IV

Both machineable homogeneous and hard homogeneous are included in this table because the two types overlap and a number of plates could qualify as

either type. With the exception of an experimental .45% C, .90% Mn armor plate which showed excessive plate metal cracking, no correlation is evident between chemical composition of the armor plate and ballistic performance. A high ratio of plate to weld cracking is indicative of poor steel quality (cleanliness and directional properties). Previous tabulations have shown that poor steel quality armor plate consistently causes excessive weld cracking. Both plate and weld cracking would be expected to increase with hardness of armor plate unless there has been a commensurate improvement in steel quality.

Electrode Data - Table V

These data do not justify any definite conclusions. It is probable that any changes in chemical composition of the weld deposits within the limits shown in these tables do not influence ballistic cracking provided a crack free weld is made with the electrode.

Joint Design - Table VI

For 1/2 inch thick armor: 74 plates were tested with 45° included angle single V, 14 plates with 60° included angle double V, and 60 plates with 60° included double V joint preparation. There was no significant difference in the amount of ballistic cracking in these three groups. Similarly, there is no definite superiority for single or double V joints with 60° included angles for either 3/8 or 1/4 inch thick armor. The performance of 3/8 inch thick plates with 45° included angle single V joint preparation was inferior to those with 60° included angle, either single or double V joint preparation. It appears that joint preparation either does not have a large effect on ballistic shock performance, or that its effect is masked by the effect of other variables. Ballistic cracking averages do not indicate any influence of width of root gap or method of backup.

Welding Procedure - Table VII

The majority of the 1/2 inch thick plates were welded with 4 or 5 passes, 3/8 inch thick plates with 3 or 4, and 5/16 and 1/4 inch thick plates entirely with 2 passes. Variations in number of passes for either the single or the double V joint preparations do not correlate with any definite trends in ballistic performance. No consistent effects of variations in order or technique of deposition, single or multiple beads in crown, or utilization or number of seal beads are evident. It is probable that the geometry of the completed weld joint does influence ballistic performance, but the firing record data are inadequate to classify the joint geometry.

Preheat temperatures of 150° - 610°F were employed for fourteen 1/2 inch thick plates. No improvement in average weld cracking is shown for the preheated plates.

One 3/8 inch thick plate was welded with a single unionmelt pass (chart No. 106, Appendix A). The plate failed radiographic inspection and developed excessive plate metal cracking.

Radiographic Data - Table VIII

Radiographic unsoundness was associated with increased weld cracking for 1/2, 3/8, and 1/4 inch thick plates. All 5/16 inch plates passed radiographic inspection.

TABLE I
Index to Plates

Hand Welded 1/2 Inch Thick Rolled Armor "H" Plates

<u>Chart No.</u>	<u>No. of Plates</u>	<u>Fabricator</u>	<u>Armor Mfgr.</u>	<u>Electrode Mfgr.</u>
1	2	American Locomotive	Youngstown	Harnischfeger
2	1	Ames Baldwin Wyoming Company	Youngstown Great Lakes	Crucible
3-15	33	Buick Motor	Republic Great Lakes Jones & Laughlin Youngstown	Alloy Rods Harnischfeger
16	2	Buick Youngstown	Great Lakes Youngstown	Crucible
17-24	17	Cadillac	Great Lakes	McKay Harnischfeger
25-26	3	Chicago Vitreous Enamel Prod. Co.	Jones & Laughlin Youngstown	Crucible
27	1	Federal Machine	Republic	Harnischfeger
28	2	Fisher Tank Division	Jones & Laughlin Great Lakes	McKay
29-31	9	Fisher Body Lansing Div.	Jones & Laughlin	Harnischfeger
32-33	4	Fitzgibbons Boiler Company	Jones & Laughlin Carnegie-Illinois Great Lakes Youngstown	Harnischfeger Lincoln Electric
34-35	2	Florence Stove	Great Lakes Jones & Laughlin	Crucible
36-46	30	Ford Motor Company	Ford Motor Company	Crucible Arcos Reid Avery Page Metal & Thermit
47-48	6	General American Transportation Corp.	Carnegie-Illinois	McKay Crucible
49	1	General Spring Bumper Division	Great Lakes Jones & Laughlin	Crucible
50-51	2	Gerity-Adrian	Great Lakes Jones & Laughlin	Crucible
52	1	Gordon Mfg.	Jones & Laughlin	Crucible
53	1	Holland Furnace	Youngstown	Crucible

TABLE I (Cont'd)

<u>Chart No.</u>	<u>No. of Plates</u>	<u>Fabricator</u>	<u>Armor Mfgr.</u>	<u>Electrode Mfgr.</u>
54-60	16	Ilco Ordnance	Republic Great Lakes Carnegie-Illinois Ingersoll Steel	Harnischfeger Alloy Rods A. O. Smith
61	1	Ingram Richardson	Jones & Laughlin Great Lakes	Crucible
62	1	W. B. Jarvis	Great Lakes Jones & Laughlin	Crucible
63-64	2	Kalamazoo	Youngstown Great Lakes	Crucible
65-70	5	Marmon-Herrington	Ingersoll Great Lakes	McKay
71	1	Midland Steel	Jones & Laughlin	Crucible
72	1	McInerney Spring & Wire Company	Jones & Laughlin Great Lakes	Crucible
73-77	10	Ternstedt	Jones & Laughlin	Alloy Rods McKay Hollup Page

Hand Welded 3/8 Inch Thick Rolled "H" Plates

78	3	Buick Motor Div.	Republic	Harnischfeger Crucible
79	1	Cadillac	Great Lakes	Reid-Avery McKay
80-81	5	Chevrolet	E. C. Atkins Chevrolet Forge	Lincoln Electric Crucible
82-86	11	Deere & Company	Youngstown Jones & Laughlin	Crucible Arcos Lincoln Electric A. O. Smith
87-103	45	Ford Motor Co.	Ford Motor Co.	Arcos Crucible Lincoln Electric Metal & Thermit Alloy Rods Harnischfeger McKay Reid-Avery Page

TABLE I (Cont'd)

<u>Chart No.</u>	<u>No. of Plates</u>	<u>Fabricator</u>	<u>Armor Mfgr.</u>	<u>Electrode Mfgr.</u>
104	1	International Harvester	E. C. Atkins	Crucible
105	1	Standard Steel Spring Company	Ford Motor Co.	Crucible

Unionmelt

106	1	Ford Motor Co.	Ford Motor Co.	Crucible
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Hand Welded 5/16 Inch Thick Rolled "H" Plates

107-109	9	Buick Motor Div.	Jones & Laughlin Great Lakes	Harnischfeger
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Hand Welded 1/4 Inch Thick Rolled "H" Plates

110-116	20	Buick Motor Div.	Jones & Laughlin Great Lakes Republic Steel Corp.	Harnischfeger Alloy Rods
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117-121	12	Chevrolet Motor Company	Chevrolet Forge	Harnischfeger Crucible
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TABLE II
Ballistic Severity Table for 161 - 1/2 Inch Thick Rolled Armor "H" Plates

Velocity	No. Rds.	1st Round		2nd Round		3rd Round	
		Av. Yield Cracking	Av. Plate Cracking	No. Rds.	Av. Yield Cracking	No. Rds.	Av. Yield Cracking
		Projectile - 37 mm. HE M-514					
0 - 1-3/4"	9	4.7	.2	11	7.0	3.5	8
Below 2500	89	9.3	5.0	82	9.5	2.2	43
2500-2550*	20	9.7	5.7	15	9.3	6.0	3.4
2551-2600	2	10.3	0	1	9.3	6.5	7.5
2601-2678							0
1-3/4 - 3"	3	3.0	0	1	0	0	0
Below 2500	25	3.6	0.1	23	1.7	0.4	1.4
2500-2550	21	0	0	5	0	0	3.0
2551-2600							5.3
2601-2678							2.6
Over 3"							
Below 2500	4	2.5	0	9	0	0	1.7
2500-2550	0	2.0	2.2	4	.5	2.4	.6
2551-2600	7						0
2601-2678							
0 - 1-3/4"	6	5.5	5.0	1	5.8	1.5	1
Below 2500	20	11.1	2.0	2	10.0	0	9.5
2500-2550*	8	12.6	2.5	4	10.1		5.5
2551-2600	1	9.0	9.0				
2601-2678							
1-3/4 - 3"	4	2.4	1.5	1	0	0	1
Below 2500	4	2.0	0	0	0	0	0
2500-2550	1	0	0	0	0	0	0
2551-2600	1	0	0	0	0	0	0
2601-2678							
Over 3"							
Below 2500	4	0	0	0	0	0	0
2500-2550							
2551-2600							
2601-2678							

*Uncified Velocity

TABLE II (Cont'd)

Velocity	7th Round			8th Round			9th Round		
	No. Rds.	Av. Weld Cracking	Av. Plate Cracking	No. Rds.	Av. Weld Cracking	Av. Plate Cracking	No. Rds.	Av. Weld Cracking	Av. Plate Cracking
<u>Projectile - 37 mm. HE M-54</u>									
0 - 1-3/4"									
Below 2500	1	13.0	0	1	10.7	1.5	1	8.0	2.5
2500-2550*									
2551-2600									
2601-2676									
1-3/4 - 3"									
Below 2500	1	0	0	0	0	0	1	0	0
2500-2550									
2551-2600									
2601-2676									
Over 3"									
Below 2500	1	0	0	0	0	0	0	0	0
2500-2550	1	0	0	0	1	0.5	0	0	0
2601-2676									

*Specified Velocity

TABLE II (Cont'd)

Ballistic Severity Table for 3/8 Inch Thick Rolled Armor "H" Plates

Velocity Rds.	1st Round			2nd Round			3rd Round		
	Av. Yield Cracking	Av. Plate Cracking	No.	Av. Weld Rds.	Av. Plate Cracking	No.	Av. Weld Rds.	Av. Plate Cracking	
			Projectile - 37 mm. HE M-54	Cracking	Cracking	Cracking	Cracking	Cracking	
0 - 1-3/4"									
Below 2000	6	2.33	3.2	7	6.5	1.1	4	15.1	2.0
2000-2050*	24	7.1	.36	32	4.2	.66	16	7.2	2.2
2051-2100	20	7.0	.67	7	9.1	0	7	4.8	.14
2101-2150	2	14.4	.75	3	11.2	5.7	2	7.5	0
2151-2200	1	15.0	0						
2201-2250	1	14.5	8.3						
2251-2300	1	5.0	18.0						
2492-2550	1	5.0					1	6.5	11.3
1-3/4 - 3"									
Below 2000				1	2.3	0			
2000-2050	5	0	0	7	.14	0	3	1.9	.41
2051-2100	3	0	0	7	1.83	0	2	0	0
2101-2150	1	0	0	0			1	0	0
2201-2250				2.8					
2492-2550	1	18.0							
Over 3"									
2051-2100	1	0	0	3	0	0	3	1.33	0
2407-2492	1	0	0						

* Specified Velocity

TABLE II (Cont'd)

<u>Velocity</u>	<u>No. Rds.</u>	<u>4th Round</u>		<u>5th Round</u>		<u>6th Round</u>	
		<u>Av. Yield Cracking</u>	<u>Av. Plate Cracking</u>	<u>No. Rds.</u>	<u>Av. Yield Cracking</u>	<u>Av. Plate Cracking</u>	<u>No. Rds.</u>
Projectile - 37 mm. HE M-54							
0 - 1-3/4"							
Below 2000	1	0	0				
2000-2050*	7	6.4	.07	2	.25	8.8	1
2051-2100	2	10.5	5.8	3	5.2	0	•58
2101-2150	5	11.8	0				0
2151-2200	1	0	0	1	16.8	2.3	3.0
2201-2250							
2251-2300	1	10.0	0				
2492-2550							
1-3/4 - 3"							
Below 2000							
2000-2050	4	.69	0				
2051-2100							
2101-2150	1	0	0				
2201-2250	1	13.0	18.0				
2492-2550							
Over 3"							
2051-2100							
2407-2492							

Ballistic Severity Table for 3/8 Inch Thick Rolled Unionmelt "H" Plates

	<u>1st Round</u>		<u>2nd Round</u>		<u>3rd Round</u>	
	<u>No. Rds.</u>	<u>Specified Velocity</u>	<u>No. Rds.</u>	<u>Specified Velocity</u>	<u>No. Rds.</u>	<u>Specified Velocity</u>
0 - 1-3/4"	1	0	19.8	1	0	36.0
2100						

*Specified Velocity

TABLE II (Cont'd)

Ballistic Severity Table for 5/16 Inch Thick Rolled Armor "H" Plates

<u>Velocity</u>	<u>No. Rds.</u>	<u>1st Round</u>			<u>2nd Round</u>			<u>3rd Round</u>		
		<u>Av. Weld Cracking</u>	<u>Av. Plate Cracking</u>	<u>No. Rds.</u>	<u>Av. Weld Cracking</u>	<u>Av. Plate Cracking</u>	<u>No. Rds.</u>	<u>Av. Weld Cracking</u>	<u>Av. Plate Cracking</u>	
<u>Projectile - 37 mm. HE M-54</u>										
0 - 1-3/4"										
1800-1850	5	1.4	0	1	0	0	1	12.0	0	
1851-1900				6	1.1	0	2	6.6	0	
1901-1937							2	4.12	3	
1-3/4 - 3"										
1800-1850	2	0	0				1	0		
1851-1900	2	0	0				1	0		
Over 3"										
1900	1	0	0	1	0	0	1	0	0	
<u>4th Round</u>										
0 - 1-3/4"										
1800-1850	1	20.0	4.5							
1851-1900	2	0	0							
1901-1937										
<u>5th Round</u>										
1-3/4" - 3"										
1800-1850										
1851-1900										
Over 3"										
1900										
<u>6th Round</u>										
								0		

TABLE II (Cont'd)

Ballistic Severity Table for 1/4 Inch Thick Rolled Armor "H" Plates

Velocity	No. Rds.	1st Round			2nd Round			3rd Round		
		Av. Weld Cracking	Av. Plate Cracking	No. Rds.	Av. Weld Cracking	Av. Plate Cracking	No. Rds.	Av. Weld Cracking	Av. Plate Cracking	
Projectile - 37 mm. HE M-514										
0 - 1-3/4"										
Lost Velocity	1	3.5	9.8							
1500-1600	3	13.1	0	5						
1601-1700	26	8.0	1.9	16						
1701-1800				3						
1-3/4 - 3"										
1600-1700	1	24.3	11.8	1	7.8	5	1	0	0	
Over 3"										
1800				1	3.8	0				
4th Round										
0 - 1-3/4"										
Lost Velocity										
1500-1600										
1601-1700	1	0	0							
1701-1800										
1-3/4 - 3"										
1600-1700										
Over 3"										
1800										

Specified Velocity 1600-1650 f/s

TABLE III
Fabricators of Hand Welded 1/2 Inch Thick Rolled Homogeneous Armor "H" Plates

Armor Fabricator	No. of Plates	No. of Rounds	Av. Orts/Rd. Weld Plate	Remarks
American Locomotive	2	4	21.06"	3 rds., above specified velocity 1 rd., outside 1-3/4" limit
Ames Baldwin Wyoming Co.	1	4	.50"	2 rds., outside 1-3/4" limit
Buick Motor Division	31	98	6.13"	31 rds., above specified velocity 37 rds., outside 1-3/4" limit 8 rds., below specified velocity 3 rds., velocity lost
Buick Youngstown	2	5	9.27"	1 rd., outside 1-3/4" limit
Cadillac	16	41	7.42"	9 rds., outside 1-3/4" limit 4 rds., above specified velocity 1 rd., below specified velocity
Chicago Vitreous	3	10	5.00"	2 rds., above specified velocity
Federal Machine	1	3	2.83"	3 rds., outside 1-3/4" limit
Fisher Tank Div.	2	5	7.55"	0
Fisher Lansing Body Div.	9	29	4.91"	1 rd., outside 1-3/4" limit
Fitzgibbons Boiler Co.	4	7	13.41"	8 rds., outside 1-3/4" limit 2 rds., outside 1-3/4" limit
Florence Stove	2	7	5.59"	1 rd., above specified velocity 2 rds., outside 1-3/4" limit
Ford Motor	30	88	7.07"	4 rds., above specified velocity 24 rds., outside 1-3/4" limit

TABLE III (Cont'd.)

<u>Armor Fabricator</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Crks/Rd Weld Plate</u>	<u>Remarks</u>
General American	6	15	7.41"	1.51" 3 rds. outside 1-3/4" limit
General Spring Bumper	1	2	5.00"	0 1 rd. outside 1-3/4" limit
Gevity Adrian Mfg. Corp.	2	4	7.44"	4.81" 1 rd. outside 1-3/4" limit
Gordon Mfg. Co.	1	5	5.85"	0 2 rds. above specified velocity
Holland Furnaces	1	4	1.38"	.19" 3 rds. outside 1-3/4" limit
Ilco Ordnance	16	50	5.07"	.92" 1 rd. outside 1-3/4" limit
Ingram Richardson	1	3	5.25"	0 5 rds. above specified velocity
W. B. Jarvis	1	3	6.00"	0 14 rds. outside 1-3/4" limit
Kalamazoo Stove and Furnace Co.	2	4	6.90"	1.50" 1 rd. velocity lost
Marmont Herrington	13	36	10.02"	.44" 2 rds. above specified velocity
Midland Steel	1	4	6.84"	.21" 9 rds. outside 1-3/4" limit
McInerney Spring & Wire Co.	1	2	13.50"	0 6 rds. below specified velocity
Torrestadt Mfg.	10	34	6.50"	1.97" 2 rds. above specified velocity
				5 rds. outside 1-3/4" limit
				10 rds. below specified velocity

TABLE III (Cont'd)

Fabricators of Hard Welded 3/8 Inch Thick Armor "H" Plates

Fabricator	No. of Plates	No. of Rounds	Wt. of Plate	Wt. of Weld	Crkg/rd.	Remarks
Buick	3	6	8.0"	•3"	1 rd.	outside of 1-3/4" limit
Cadillac	1	3	5.9"	0	1 rd.	below specified velocity
Chevrolet	5	21	3.3"	•7"	7 rds.	outside 1-3/4" limit
Deere and Company	11	30	5.8"	2.5"	1 rd.	below specified velocity
Ford Motor Company	45	136	5.9"	1.0"	1 rd.	lost velocity
International Harvester Co.	1	4	1.3"	0	5 rds.	outside 1-3/4" limit
Standard Steel Spring	1	4	4.0"	0	19 rds.	above specified velocity
					35 rds.	above specified velocity
					10 rds.	below specified velocity
					29 rds.	outside 1-3/4" limit
					1 rd.	Velocity lost
					1 rd.	above specified velocity

Fabricators of Hard Welded 1/4 Inch Thick Rolled Armor "H" Plates

Buick Motor	20	44	9.3"	3.8"	8 rds.	below specified velocity
Chevrolet Motor	12	28	7.1"	3.2"	1 rd.	outside 1-3/4" limit

TABLE IV
Armor Data for Hand Welded 1/2 Inch Thick Rolled Armor "H" Plates

<u>Armor</u>	<u>Mfr.</u>	<u>Type</u>	<u>Chemical Composition</u>	<u>Hrs. (Hold)</u>	<u>°F.</u>	<u>Treatment</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Crkge/Rd</u>	<u>Remarks</u>
Carnegie Illinois	I		.26 - .28 C 1.12 - 1.22 Mn .20 - .22 Si .78 - .82 Cr .83 - 1.03 Ni .19 - .30 Mo	1544 1 1 860- 896 1540 450	3/4 - 1 3/4 - 1-3/4 3/4 3/4	Water Water Water Water	340- 364	7	16	8.19" 1.90" 3 rds. outside 1-3/4" limit
Ford Motor	II	Mn-Cr-Mo	.25 - .30 C 1.18 - 1.46 Mn .21 - .29 Si .48 - .75 Cr .30 - .48 Mo	1650 1 965- 1000 48	1-1/2 - 4 2-1/2 - 4 Mo	Platen Platen Air	321- 352	30	65	7.04" 2.46" 23 rds. outside 1-3/4" limit
Great Lakes	IV	Mn-Cr-Mo-Si	.24 - .29 C .77 - .98 Mn .65 - .85 Si .56 - .76 Cr .15 - .24 Mo .04 - .10 Zr	1600- 1650 630- 950 1-1/2	1/2 4 1 - 4 Air	Water Water Air	321- 388	40	114	6.83" 1.88" 36 rds. outside 1-3/4" limit
Ingersoll Steel	IV	Mn-Ni-Si-Cr-Mo	.23 C 1.46 Mn .25 Si .33 Cr .15 Mo	1650 930	1/2 1/2	Water Water Air	321- 321	1	3	10.58" 0 1 rd. outside 1-3/4" limit

TABLE IV (Cont'd)

Armor Mater.	Type	Chemical Composition		Heat Treatment Hrs. (Hold)	BHN	Mo. of Plates	Mo. of Weld Rounds	Av. Grkg/Rd	Remarks
		•F.	•P.						
Jones & Laughlin	III Mn-Mo	•25 - 1.50 - •16 - •29 -	•28 C 1.75 Mn •27 Si •39 Mo	1600- 1650 760- 850	1/2 - 1-1/2 1/2 - 1-1/2	Meter Air or Water	337- 363	28 93	5.7" 1.0" 12 rds. above spec. vel. 16 rds. below spec. vel.
Republic	I Mn-Mi- Steel Cr-Mo	•26 C 1.10 Mn •11 Si •7 Cr •16 Mo	1600 900 1-1/2 Air	2-11/2 255	Water 255	255-	1	3	2.83" 0
V C-Mn	•45 C •90 Mn	1600 1550 825	1 1 2	Air Caustic Air	341 341	9	23	7.43" 7.40"	7 rds. outside 1-3/4" limit
V Special	•33 - 1.03 Mn •25 - •44 - •25 - •12 -	•34 C 1650 860 3 3 •14 Cr •14 Mo	1/2 Air	Water 352- 352	7	19	10.14" 10.32"	7 rds. outside 1-3/4" limit	
Youngstown Sheet & Tube Mn-Mo	III Mn-Mo	•23 - 1.38 - 1.6 - 1.5 -	•26 C 1.70 Mn •23 Si •50 Ni	1600 810- 900 900	1/2 1 1 1/2	Water Air Air Water	321- 363	9 25	9.03" 1.04" 12 rds. above spec. vel. 2 rds. below spec. vel.
E. C. Atkins	RIV	•27 - •59 Mn •95 Si •65 Cr	•32 C 860- 920	1650 1-1/2 - 2	15 Air or Water	321- 388	4 19	1.6"	•6" 6 rds. outside 1-3/4" limit
Armor Data for Hand Welded 3/8 Inch Thick Rolled Armor "H" Plates									
									10 rds. above spec. vel. 2 rds. below spec. vel.

TABLE IV (Cont'd)

Mfr.	Armor Type	Chemical Composition	Heat Treatment			No. of Plates	No. of Rounds	Av. Crkg/Rd Yield	Remarks
			Hrs. (Hold)	Quench	BHM				
Chevrolet	RIV	.27 C .96 Mn .67 Si .48 Cr .22 Mo .09 Zr	1600	52 min	Water	321	2	6	7.5" 1 rd. outside 1-3/4" limit
Forge				3	Air	321			
Ford Motor	RIV	.25 - 1.18 - .24 - .52 - .30 -	.29 C 1.38 Mn .30 Si .60 Cr .45 Mo	1575 min 4-1/2 965- 1020	Water 45 min 1 - 3 Air	311-352	46	140	6.0" 1.0" 35 rds. above spec. vel. 30 rds. outside 1-3/4" limit
Great Lakes	RIV	.26 C .96 Mn .77 Si .76 Cr .21 Mo .07 Zr	1650	30 min	Water	401	1	3	5.9" 0 1 rd. outside 1-3/4" limit 1 rd. below spec. vel.
Jones & Laughlin	RILL	.28 - 1.64 - .22 - .40 -	.31 C 1.72 Mn .26 Si .50 Mo	1600- 1650 865- 1000	1-1/4 - Water 1-1/2 Air 2 - Air 2-1/2	331-341 331-363	3	9	9.6" 0.2" 1 rd. outside 1-3/4" limit
Republic Steel Co.	RI	.33 C 1.01 - .24 - .25 - .42 - .11 -	1650 1.03 Mn .57 Si .46 Cr .50 Ni .13 Mo	830	2 Water 3 Air	352-388	3	6	8.0" .3" 3 rds. outside 1-3/4" limit
Youngstown Sheet & Tube	RILL	.20 - 1.50 - .15 - .03 Cr	.23 C 1.54 Mn .20 Si .50 Mo	1650 865	1-1/4 Water 2 Air	352-363	5	16	5.5" 3.4" 3 rds. outside 1-3/4" limit 1 rd. velocity lost

TABLE IV (Cont'd.)

Armor Date for Hand Welded 1/4 Inch Thick Rolled Armor "H" Plates

Mfr.	Type	Chemical Composition	°F.	Heat Treatment		No. of Plates	No. of Rounds	Avg. Crkg/Rd	Remarks
				Hrs. (Hold)	Quench				
Chevrolet	RIV	.27 - .29 C .84 - .90 Mn .70 - .76 Si .55 - .65 Cr .19 - .22 Mo	1600 950- 1050 Cr Mo	1/2	Mater	295- 341	12 4	7.1" 3.2"	2 rds. outside 1-3/4" limit
Fargo									26 rds. above spec. vel.
Great Lakes	RIV	.27 - .28 C .70 - .71 Mn .50 - .70 Si .61 - .64 Cr .22 - .25 Mo .08 Zr	1600- 1650 900- 910 Mo	1/2 - 1 - 1-1/2 Air	Water	341- 363	8	10.5" 5.4"	2 rds. outside 1-3/4" limit
Jones & Laughlin	RIV	.21 C .1.38 Mn .20 Si .32 Mo	1600 1 900 1	1	Air	341- 363	3	1.2" 0	1 rd. outside 1-3/4" limit
Republic Steel	HV	.29 - .33 C 1.00 - 1.01 Mn .24 - .27 Si .24 - .44 Cr .42 - .48 Ni .11 - .12 Mo	1650 860 2 - 3 Water or Air	1 - 2 Water or Air	Water or Air	3552	9	18 12.1" 3.8"	6 rds. below spec. vel.

TABLE V (Cont'd)

Electrode M.F.C.	Brand	Mold Metal Composition	Coating Plates	No. of Rounds	Av. C _r Weld	C _r Plate	Remarks
Crucible Steel	Roristal Armorize	.07 - .14 C 1.74 - 2.23 Mn .18 - .45 Si 14.57 - 20.28 Cr 7.29 - 10.64 Ni .82 - 2.01 Mo	Line 2.13 - 4.18 Mn .50 - .63 Si 21.02 - 21.32 Cr 9.56 - 10.80 Ni .05 - .10 Mo	16 54	6.0"n	2.2"	21 rds. outside 1-3/4" limit 13" rds. above specified velocity 4" rds. below specified velocity
Harnischfeger A17		.07 - .12 C	Line	4	5.53"	1.07"	3 rds. outside 1-3/4" limit 2 rds. above specified velocity
Karnischfeger		.07 - .15 C 1.48 - 3.96 Mn .39 - .60 Si 18.49 - 20.36 Cr 9.00 - 10.51 Ni .70 - 1.67 Mo tr. - .05 V .06 - .05 Cu	Line 27	84	6.31"	1.4"	40 rds. above specified velocity 23 rds. outside 1-3/4" limit 7 rds. below specified velocity
Harnischfeger A13C Smootharc		.05 - .12 C 1.80 - 3.90 Mn .27 - .56 Si 16.6 - 19.7 Cr 9.39 - 10.7 Ni .76 - 1.82 Mo	Titania 2	6	2.99"	2.5"	3 rds. below specified velocity
Harnischfeger A13C		.10C 4.0 - 4.34 Mn .30 - .66 Si 19.0 - 19.4 Cr 9.2 - 9.5 Ni .70 - .80 Mo	Line 10	29	6.3"	1.2"	1 rd. above specified velocity 4 rds. outside 1-3/4" limit

TABLE V

Electrode Data for Hand Welded 1/2 Inch Thick Rolled "H" Plates

Electrode Mfr.	Brand	Weld Metal Composition	Coating	No. of Plates	No. of Rounds	Av. Crkg/Rd. Held.	Crkg/Rd. Plate	Remarks
Alloy Rods	Armorarc	.06 - .10 C 1.04 - 1.36 Mn .22 - .26 Si	Lime	5	15	5.47"	5.29"	13 rds. above specified velocity 1 rd. below specified velocity 7 rds. outside 1-3/4" limit
		16.51 - 16.97 Cr 9.79 - 10.06 Ni 2.64 - 2.75 Mo						
Alloy Rods	Armorarc	.07 - .15 C 3.30 - 4.75 Mn .06 - .75 Si 18.0 - 20.0 Cr 8.25 - 10.5 Ni 1.25 Mo		11	40	5.6"	1.5"	13 rds. outside 1-3/4" limit 4 rds. above specified velocity 5 rds. below specified velocity
Arcos Corp.	Mang	.091 C	Titania	4	10	10.10"	3.75"	3 rds. outside 1-3/4" limit
		3.26 - 3.85 Mn .26 - .43 Si 16.6 - 19.06 Cr 9.34 - 9.7 Ni .59 - .62 Mo						
Arcos Corp.	Chromang	.065 - .06 C	Lime	4	13	6.26"	.22"	8 rds. outside 1-3/4" limit
Crucible Steel	Rozistal Armorize	.09 - .16 C 2.01 - 4.44 Mn .21 - .52 Si 13.52 - 21.0 Cr 9.40 - 10.70 Ni .62 - 1.94 Mo		19	53	6.5"	1.7"	11 rds. outside 1-3/4" limit 4 rds. above specified velocity 3 rds. below specified velocity

TABLE V (Cont'd)

<u>Electrode</u> <u>Mfr.</u>	<u>Brand</u>	<u>Weld Metal</u>	<u>Coating</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Crkg/Rd</u>	<u>Remarks</u>
<u>Mfr.</u>		<u>Composition</u>		<u>Weld</u>	<u>Plate</u>	<u>Crkg/Rd</u>	
Hollup Corp.	Armorrod	.14 C 4.26 Mn 19.78 Cr .51 Si 9.72 Ni .74 Mo	Lime	1	2	23.12" 0"	1 rd. below specified velocity
Lincoln Electric	Armorgold	.08 - .12C 3.50 - 4.25 Mn .45 - .80 Si .32 - .64 Si 19.0 - 20.5 Cr 8.5 - 10.0 Ni	Lime	2	3	14.00" .42"	1 rd. outside 1-3/4" limit
McKay Co.	Armorloy	.095- .16 C 3.80 - 4.60 Mn .32 - .64 Si 9.12 - 10.30 Ni 18.55 - 20.80 Cr .06 - .89 Mo	Lime	27	73	8.7" 2.3"	13 rds. outside 1-3/4" limit 4 rds. above specified velocity 12 rds. below specified velocity
Metal & Thermit	Murex	.09 C 3.38 Mn .37 Si 18.55 Cr 9.11 Ni .64 Mo	Lime	1	2	16.92" 0	
Page Steel & Wire	Page	.095- .101 C 3.81 - 4.08 Mn .24 - .40 Si 20.51 - 22.46 Cr 9.74 - 10.21 Ni .63 - .78 Mo .13 - .15 C 3.54 - 3.74 Mn 20.10 Cr 9.54 - 9.64 Ni .34 - .35 Mo	Titania	4	12	6.43" 4.03"	5 rds. below specified velocity 2 rds. outside 1-3/4" limit

TABLE V (Cont'd)

Electrode Mfr.	Brand	Weld Metal Composition	Coating Plates	No. of Weld Rounds	Av. Crdg./3d Plate	Remarks
A. O. Smith	S4-164	.08 - .12 C 3.20 - 3.70 Mn .50 - .75 S 18.00 - 19.5 Cr 9.0 - 10.5 Ni .75 - 1.2 Mo	Lime	7	20	6.06" 1.07" 2 rds. above specified velocity 6 rds. outside 1-3/4" limit
Reid-Avery	Raco	.11 C 1.62 - 2.00 Mn .40 - .50 Si 18.79 - 19.50 Cr 4.25 - 10.60 Ni 2.05 - 2.20 Mo	Titania	2	5	1.70" 2.82" 1 rd. outside 1-3/4" limit
<u>Electrode Data for Hand Welded 3/8 Inch Thick Rolled Armor "H" Plates</u>						
Alloy Rods	Alloy Manganese	.14 C 3.7 Mn .05 Si 19.00 Cr 9.25 Ni	Titania	1	4	10.2"
Alloy Rods	Armorarc	.11 C 4.56 Mn .80 Si 19.82 Cr 10.2 Ni .98 Mo	Titania	1	3	0
Arcos Corp.	Chromang	.065 - .117 C 3.26 - 4.75 Mn .26 - .50 Si 16.0 - 21.0 Cr 8.9 - 10.7 Ni .54 - 1.10 Mo	Lime	10	30	8.1" 2.7" 7 rds. outside 1-3/4" limit

TABLE V (Cont'd.)

Electrode Mfr.	Brand	Weld Metal Composition	Coating	No. of Plates	No. of Rounds	Av. Crkg/Rd Weld	Av. Crkg/Rd Plate	Remarks
Crucible Steel	Armorize Resistol	.10 - .15 C 3.75 - 4.44 Mn .19 - .42 Si 18.76 - 20.04 Cr 9.36 - 10.31 Ni .63 - 1.25 Mo		15	42	8.2"	1.7"	6 rds. outside 1-3/4" limit
Crucible Steel	Armorize Resistol	.10 - .11 C 1.76 - 1.92 Mn .18 - .26 Si 16.31 - 18.8 Cr 7.78 - 10.2 Ni .82 - .87 Mo		6	16	5.5"	0	3 rds. outside 1-3/4" limit
Crucible Steel	Armorize Resistol	.095 - .12 C 1.76 - 2.23 Mn .31 Si 18.68 - 19.70 Cr 10.46 - 10.64 Ni 2.22 - 2.28 Mo	Titania Shielded Arc	5	20	2.5"	.8"	11 rds. outside 1-3/4" limit
Crucible Steel	Armorize Resistol	.06 C 2.10 Mn 19.16 Cr 9.21 Ni 1.61 Mo .20 V	Titania	1	4	1.3"	0	
Harnischfeger	AW3C	.10 C 3.80 Mn .24 Si 19.41 Cr 9.11 Ni .61 Mo	Lime	2	4	2.8"	0	

TABLE V (Cont'd.)

Electrode Mfr.	Brand	Weld Metal Composition	Coating	No. of Plates	No. of Rounds	Avg. Crkg/Rd Weld	Crkg/Rd Plate	Remarks
Harnischfeger	P&E	.11 C 1.65 Mn .67 Si .4 Cr	Lime	1	2	15.5"	0	
	Smootharc							
Lincoln Electric	ARM-1 Armoweld	.06 - .12 C 4.0 - 4.85 Mn .50 - .79 Si 17.0 - 20.2 Cr 9.7 - 10.4 Ni	Lime	8	33	6.8"	2.0"	9 rds. outside 1-3/4" limit
Metal & Thermit	Murex	.07 - .08 C 1.0 - 1.40 Mn .50 Si 18.0 Cr 10.0 - 10.3 Ni 2.0 Mo	Titania Lime	2	6	5.5"	0	1 rd. outside 1-3/4" limit
Metal & Thermit	Murex	.09 C 3.40 Mn .36 Si 20.0 Cr 9.59 Ni .61 Mo	Lime	1	2	14.7"	1.4"	
McKay Co.	Armorloy	.06 C 6.0 Mn 19.22 Cr 9.86 Ni .06 Mo	Titania	1	2	4.4"	0	

TABLE V (Cont'd.)

Electrode Mfr.	Brand	Yield Metal Composition	Coating	No. of Plates	No. of Rounds	Av. Crkg/Rd Yield	Av. Crkg/Rd Plate	Remarks
Page	Page		Lime	1	2	10.6"	5.7"	
McKey Co.	Armorloy	.12 C 4.60 Mn .55 Si 19.20 Cr 9.44 Ti	Titanium	3	2	2.3"	0	1 rd. outside 1-3/4" limit
Page Steel & Wire Co.	Page	.16 C 4.08 Mn .40 Si 21.02 Cr 10.21 Ni .78 Mo	Titanium	3	2	2.3"	0	1 rd. outside 1-3/4" limit
Reid-Avery Arc #18	Raco Shield	Not Given	C	1	2	10.1"	0	1 rd. outside 1-3/4" limit
Reid-Avery Racolloy			C 4.10 Mn .33 Si 19.60 Cr 9.70 Ni .63 Mo	Lime	2	7	.9"	0
Reid-Avery	Racolloy		C 5.74 Mn .42 Si 19.38 Cr 10.28 Ni .56 Mo	Lime	2	5	9.7"	1.1"

TABLE V (Cont'd.)

<u>Electrode Mfr.</u>	<u>Brand</u>	<u>Weld Metal Composition</u>	<u>Coating</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Avg. Orke/Rd. Plate</u>	<u>Remarks</u>
A. O. Smith	SM-164	.08 C 3.5 Mn .35 Si 39.0 Cr 10.0 Ni 1.0 Mo	Lime	2	5	4.3"	.2"
<u>Electrode Data for Hand Welded 1/4 Inch Thick Rolled Armor "H" Plates</u>							
Allloy Rods Armarc		.08 C 1.04 Mn .26 Si 18.97 Cr 10.08 Ni 2.01 Mo	Lime	1	1	24.3"	11.8" 1 rd. outside 1-3/4" limit
Crucible Steel	Armoric	.10 -.12 C 4.10 - 4.36 Mn .39 -.71 Si 19.7 -20.8 Cr 10.0 -10.7 Ni 1.00 - 1.30 Mo	Titania	6	14	6.7"	2.8" 1 rd. outside 1-3/4" limit 12 rds. above specified velocity
Harnischfeger AWS		.07 -.15 C 3.50 - 4.47 Mn .26 -.65 Si 19.5 -21.02 Cr 9.0 -10.7 Ni .50 -.86 Mo	Lime	21	48	8.4"	3.9" 1 rd. outside 1-3/4" limit 1 rd. velocity lost 18 rds. above specified velocity 7 rds. below specified velocity
Harnischfeger AWS		.15 C 1.46 Mn .47 Si 20.03 Cr 10.21 Ni 1.84 - 1.89 Mo	Lime	4	9	9.8"	1.4" 5 rds. above specified velocity 1 rd. below specified velocity

TABLE VI

Joint Design Data for 1/2 Inch Thick Rolled Armor "H" Plates

<u>Angle of Bevel</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Ave. Orifice/Rd.</u>	<u>Welded Plate</u>	<u>Remarks</u>
45° ST	7 ₄	206	7.43"	1.52"	50 rds. outside 1-3/4" limit 20 rds. above specified velocity 16 rds. below specified velocity
60° SV	15	42	6.96"	1.01"	17 rds. outside 1-3/4" limit 10 rds. above specified velocity
90° ST	3	10	7.30"	2.85"	2 rds. outside 1-3/4" limit 1 rd. above specified velocity 1 rd. below specified velocity
30° DV	1	4	3.89"	0"	
60° DV	60	181	6.3"	2.7"	59 rds. above specified velocity 23 rds. below specified velocity
90° DV	8	27	4.07"	1.07"	9 rds. outside 1-3/4" limit 1 rd. above specified velocity
<u>Joint Design Data for 3/8 Inch Thick Rolled Armor "H" Plates</u>					
45° ST	4 ₄	130	7.8"	1.3"	25 rds. outside 1-3/4" limit
60° ST	10	32	4.9"	.4"	10 rds. outside 1-3/4" limit
90° SV	3	8	9.6"	4.8"	
60° DV	9	30	4.5"	.6"	8 rds. outside 1-3/4" limit
90° DV	1	4	1.3"	0	

TABLE VI (Cont'd)

Joint Design Data for Hand Welded 1/4 Inch Thick Rolled Armor "H" Plates

<u>Angle of Bevel</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Avg. Crkg/Rd.</u>	<u>Weld Plate</u>	<u>Remarks</u>
Not given	4	10	4.5"	2.1"	9 rds. above specified velocity 1 rd. outside 1-3/4" limit
60° SV	8	18	8.7"	3.8"	1 rd. outside 1-3/4" limit 17 rds. above specified velocity
60° DV	20	44	9.3"	3.6"	1½ rds. above specified velocity 1 rd. velocity lost 3 rds. outside 1-3/4" limit 8 rds. below specified velocity

Joint Design Data for 1/2 Inch Thick Rolled Armor "H" Plates

<u>Root Gap</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Avg. Cracking/Rd.</u>	<u>Yield Plate</u>	<u>Remarks</u>
1/16"	2	7	5.60"	0	3 rds. outside 1-3/4" limit 5 rds. above specified velocity
1/8"	5	21	6.95"	•81"	6 rds. outside 1-3/4" limit 2 rds. above specified velocity
5/32"	9	21	7.43"	5.68"	3 rds. outside 1-3/4" limit
3/16"	46	123	8.54"	2.61"	28 rds. outside 1-3/4" limit 25 rds. above specified velocity 6 rds. below specified velocity
1/4"	68	206	6.34"	1.5"	54 rds. outside 1-3/4" limit 24 rds. above specified velocity 14 rds. below specified velocity
9/32"	1	3	10.62"	•33"	1 rd. outside 1-3/4" limit

TABLE VI (Cont'd.)

Root Gap	No. of Plates	No. of Rounds	Av. Weld Plate	Remarks		
				Cracking/Rd.	Rd.	
5/16"	22	74	4.87"	1.76"	36 rds. outside 1-3/4" limit 40 rds. above specified velocity 2 rds. below specified velocity	
3/8"	2	5	7.55"	0	1 rd. outside 1-3/4" limit	
1/2"	2	7	5.28"	1.82"	2 rds. outside 1-3/4" limit	
Not given	1	3	15.36"	0	2 rds. below specified velocity	
<u>Joint Design Data for Hand Welded 3/8 Inch Thick Rolled "H" Plates</u>						
None Given	1	6	.4	0	5 rds. outside 1-3/4" limit	
3/32"	1	2	29.35"	1.3"		
3/32 to 1/8"	1	4	1.4"	0		
1/8"	1	5	5.4"	0	1 rd. outside 1-3/4" limit	
1/8 to 1/4"	8	26	4.9"	1.2"	10 rds. outside 1-3/4" limit	
5/32"	12	34	5.3"	1.4"	4 rds. outside 1-3/4" limit	
3/16"	36	105	7.6"	1.1"	18 rds. outside 1-3/4" limit	
3/16 to 1/4"	2	7	3.2"	1.5"	3 rds. outside 1-3/4" limit	
1/4"	5	15	4.8"	0	2 rds. outside 1-3/4" limit	

TABLE VI (Cont'd)

Joint Design Data for Hand Welded 1/4 Inch Thick Rolled "H" Plates

<u>Root Gap</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Cracking/Rd. Weld</u>	<u>Remarks</u>
3/16"	16	41	3.4"	2.8" 2 rds. outside 1-3/4" limit 2 rds. below specified velocity
1/4"	14	31	5.4"	4.6" 6 rds. below specified velocity 2 rds. outside 1-3/4" limit 1 rd. velocity lost

Joint Design Data for 1/2 Inch Thick Rolled Armor "H" Plates

<u>Backing</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Cracking/Rd. Weld</u>	<u>Remarks</u>
Copper	56	260	7.91"	1.85" 21 rds. above specified velocity 57 rds. outside 1-3/4" limit 17 rds. below specified velocity 1 rd. velocity lost
Brass	5	13	9.03"	.5" 2 rds. above specified velocity 1 rd. outside 1-3/4" limit 2 rds. below specified velocity
Tin	9	23	5.92"	4.7" 3 rds. above specified velocity 6 rds. outside 1-3/4" limit
Not Given	61	174	6.49"	2.40" 35 rds. above specified velocity 58 rds. outside 1-3/4" limit 44 rds. below specified velocity

Joint Design Data for 3/8 Inch Thick Rolled Armor "H" Plates

Copper	44	132	6.0"	1.2" 26 rds. outside 1-3/4" limit
None	3	12	6.7"	1.0" 5 rds. outside 1-3/4" limit
Not Given	20	60	5.4"	1.0" 10 rds. outside 1-3/4" limit

TABLE VI (Cont'd)

Joint Design Data for Hand Welded 1/4 Inch Thick Rolled Armor "H" Plates

<u>Backing</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Yield</u>	<u>Cracking/Rd.</u>	<u>Remarks</u>
				<u>Weld Plate</u>	
Copper	12	28	9.5"	3.3"	3 rds. outside 1-3/4" limit 21 rds. above specified velocity 2 rds. below specified velocity
Not Given	20	38	10.2"	4.6"	20 rds. above specified velocity 6 rds. below specified velocity 2 rds. outside 1-3/4" limit 1 rd. velocity lost

TABLE VII

Welding Procedure for Hand Welded 1/2 Inch Thick Rolled Armor "H" Plates

<u>No. of Passes</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Cracking/Rd. Weld</u>	<u>Plate</u>	<u>Remarks</u>
SV 2	1	4	4.4"	1.6"	1 rd. outside 1-3/4" limit
3	4	10	6.3"	.6"	1 rd. outside 1-3/4" limit 1 rd. above specified velocity 2 rds. below specified velocity
4	38	95	7.5"	2.3"	26 rds. outside 1-3/4" limit 14 rds. above specified velocity 1 rd. below specified velocity
5	28	85	8.1"	1.3"	27 rds. outside 1-3/4" limit 12 rds. above specified velocity 12 rds. below specified velocity 1 rd. velocity lost
6	8	38	2.3"	.4"	10 rds. outside 1-3/4" limit 2 rds. above specified velocity
7	4	9	12.5"	1.1"	1 rd. outside 1-3/4" limit 2 rds. above specified velocity
8	3	8	4.0"	.9"	2 rds. below specified velocity
9	2	6	7.4"	3.4"	1 rd. outside 1-3/4" limit
11	1	4	10.8"	0	2 rds. outside 1-3/4" limit
12	2	4	8.8"	4.3"	

TABLE VII (Cont'd.)

No. of Passes	No. of Plates	No. of Rounds	Av. Cracking/Rd. Yield Plate	Remarks
2	2	6	2.8"	9.0" 1 rd. velocity lost 5 rds. below specified velocity
3	7	22	4.5"	1.0" 4 rds. outside 1-3/4" limit 1 rd. above specified velocity 1 rd. velocity lost
4	33	100	9.0"	4.6" 21 rds. outside 1-3/4" limit 12 rds. above specified velocity 8 rds. below specified velocity
5	17	59	6.5"	2.1" 23 rds. outside 1-3/4" limit 5 rds. above specified velocity 13 rds. below specified velocity
6	1	1	6.7"	33.0" 1 rd. outside 1-3/4" limit
8	7	20	3.9	•4" 5 rds. outside 1-3/4" limit
<u>Welding Procedure for Hand Welded 3/8 Inch Thick Rolled Armor "H" Plates</u>				
3	27	85	6.0"	•9" 14 rds. outside 1-3/4" limit
4	17	52	6.9"	1.2" 15 rds. outside 1-3/4" limit
5	6	16	6.1"	2.1" 3 rds. outside 1-3/4" limit
11	3	8	2.5"	0 3 rds. outside 1-3/4" limit
12	4	9	8.7"	2.1"

TABLE VII (Cont'd)

No. of Passes	No. of Plates	No. of Rounds	Av. Cracking/Rd. Weld Plate	Remarks
D7	2	2	4	2.07"
				0
				7 rds. outside 1-3/4" limit

3 6 23 4.07" G#

8 2 7 3.03" 0 1 rd. outside 1-3/4" limit

Welding Procedure for Hand Welded 1/4 Inch Thick Rolled Armor "H" Plates

No. of Passes	No. of Plates	No. of Rounds	Av. Cracking/Rd. Weld Plate	Remarks
S7	2	10	22	9.07"
				3.02"
				1 rd. outside 1-3/4" limit
				18 rds. above specified velocity
				2 rds. below specified velocity
D7	2	20	46	7.04"
				3.03"
				3 rds. outside 1-3/4" limit
				1 rd. velocity lost
				23 rds. above specified velocity
				8 rds. below specified velocity
				6 rds. above specified velocity
2	2	6	4.04"	1.05"
Bevel Not Given				

Welding Procedure for Hand Welded 1/2 Inch Thick Rolled Armor "H" Plates

Deposition	No. of Plates	No. of Rounds	Av. Cracking/Rd. Weld Plate	Remarks
S7	waves and single crown	53	152	8.21"
				1.09"
				109 rds. outside 1-3/4" limit
				29 rds. above specified velocity
				7 rds. below specified velocity

TABLE VII (Cont'd)

<u>Disposition</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Ay. Cracking/Rd Held Plate</u>	<u>Remarks</u>
ST bead and single crown	2	6	2.0"	6 rds. below specified velocity 1 rd. above specified velocity
weaves and a multiple crown	17	56	5.8" •5"	3 rds. outside 1-3/4" limit 1 rd. above specified velocity
beads and multiple crown	3	7	8.0" 2.7"	16 rds. outside 1-3/4" limit 2 rds. below specified velocity
combination weaves and beads and single crown	1	2	5.5" 3.0"	
combination weaves and beads and multiple crown	16	44	6.9" 1.5"	4 rds. above specified velocity 10 rds. outside 1-3/4" limit
seed bead	90	250	7.3" 1.5"	30 rds. above specified velocity 54 rds. outside 1-3/4" limit 17 rds. below specified velocity
no seed bead	2	6	6.3" 1.9"	1 rd. outside 1-3/4" limit 1 rd. below specified velocity
DW all weaves	59	180	6.5" 2.6"	41 rds. outside 1-3/4" limit 32 rds. below specified velocity
weaves and multiple crown	8	19	4.5" •4"	5 rds. outside 1-3/4" limit
combination weaves and beads multiple crown.	2	4	8.1" 1.3"	1 rd. outside 1-3/4" limit 1 rd. below specified velocity

TABLE VII (Cont'd.)

Welding Procedure for Hand Welded $\frac{3}{5}$ Inch Thick Rolled Armor "H" Plates

<u>Deposition</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Avg. Weld</u>	<u>Cracking/Rd Plate</u>	<u>Remarks</u>
SV					
weaves and multiple crown with one seal bead	47	123	6.4"	3.6"	29 rds. outside 1-3/4" limit
beads with a multiple crown and 4 seal beads	6	15	5.3"	1.4"	2 rds. outside 1-3/4" limit
beads with a multiple crown and 3 seal beads	3	4	.9"	0	2 rds. outside 1-3/4" limit
weaves and beads with a multiple crown and 3 seal beads	4	24	7.7"	1.9"	1 rd. outside 1-3/4" limit
weaves and beads with a single crown and 1 seal bead	1	4	5.2"	2.1"	1 rd. outside 1-3/4" limit
DV					
weaves with a multiple crown	1	7	5.9"	0	1 rd. outside 1-3/4" limit
weaves and single crown	5	27	3.3"	.7"	7 rds. outside 1-3/4" limit

TABLE VII (Cont'd.)

Welding Procedure for Hand Welded 1/4 Inch Thick Rolled Armor "H" Plates

<u>Deposition</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Weld Plate</u>	<u>Cracking/Rd</u>	<u>Remarks</u>
SV 2 weaves only	10	22	9.7"	3.2"	1 rd. outside 1-3/4" limit 18 rds. above specified velocity 2 rds. below specified velocity
DV 2 weaves only	20	48	7.4"	3.3"	3 rds. outside 1-3/4" limit 1 rd. velocity lost 23 rds. above specified velocity 8 rds. below specified velocity

Bevel not given
2 weaves only 2 6 4.4" 1.8" 6 rds. above specified velocity

Welding Procedure for Hand Welded 1/2 Inch Thick Rolled Armor "H" Plates

<u>Preheat °F</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Weld Plate</u>	<u>Cracking/Rd</u>	<u>Remarks</u>
70° - 115°	147	422	6.7"	2.1"	63 rds. above specified velocity 112 rds. outside 1-3/4" limit 33 rds. below specified velocity 6 rds. velocity lost
150°	8	24	5.9"	.7"	2 rds. above specified velocity 7 rds. outside 1-3/4" limit 1 rd. not given
200°	2	6	6.4"	2.0"	1 rd. outside 1-3/4" limit 1 rd. below specified velocity
250°	3	9	9.0"	0	4 rds. outside 1-3/4" limit 2 rds. below specified velocity
610°	1	2	8.4"	0	

TABLE VIII

Radiographic Data for 1/2 Inch Thick Rolled Armor "H" Plates

<u>Radiographic Results</u>	<u>No. of Plates</u>	<u>No. of Rounds</u>	<u>Av. Cracking/Rd Weld</u>	<u>Av. Cracking/Rd Plate</u>	<u>Remarks</u>
Passed	135	393	6.64"	1.92"	102 rds. outside 1-3/4" limit 82 rds. above specified velocity 31 rds. below specified velocity
Failed	26	77	7.2"	1.8"	14 rds. above specified velocity 22 rds. outside 1-3/4" limit 8 rds. below specified velocity

Radiographic Data for 3/8 Inch Thick Rolled Armor "H" Plates

Passed	60	184	5.8"	.8"	32 rds. outside 1-3/4" limit
Failed	7	20	7.3"	3.7"	11 rds. outside 1-3/4" limit

Radiographic Data for 1/4 Inch Thick Rolled Armor "H" Plates

Passed	30	72	9.5"	4.3"	3 rds. outside 1-3/4" limit 49 rds. above specified velocity 12 rds. below specified velocity 1 rd. velocity lost
Failed	2	4	13.4"	2.5"	1 rd. outside 1-3/4" limit 3 rds. above specified velocity

APPENDIX A

1. Key to tabulation method and symbols.
2. Specification requirements for H plates welded with austenitic electrodes.
3. Tabulation of firing record data for subject H plates.

KEY TO TABULATION METHOD AND SYMBOLS

1. Identification of Test

Information in the first column identifies the test.

2. Armor Data

A. Plate Thicknesses

Plates in this tabulation are of 1 inch and 3/4 inch thick homogeneous armor.

B. Type Armor

Armor compositions are typed as follows:

Typical Analyses

R (Rolled)

	Type	C	Mn	Si	Cr	Mo	Ni	Zr
I	Mn-Ni-Cr-Mo	.26	1.15	.20	.60	.20	1.00	
II	Mn-Cr-Mo	.27	1.30	.25	.55	.42		
III	Mn-Mo	.25	1.60	.22	—	.37		
IV	Mn-Cr-Mo-Si	.27	.86	.79	.62	.17		.09
V	Special	(noted in tabulation)						

C (Cast)

I	Mn-Ni-Cr-Mo	.32	.80	.35	.55	.40	.45
II	Mn-Cr-Mo	.28	1.55	.45	.40	.12	
III	Mn-Mo	.30	1.58	.40	—	.30	
IV	Special	(noted in tabulation)					

C. Carbon Content

Carbon content is listed as given.

D. Brinell Hardness Number (BHN)

The Brinell hardness numbers on both the front and back of plate are tabulated.

E. Process

This refers to the melting practice and is given as basic open hearth (B.O.H.), acid open hearth (A.O.H.), basic electric (B. Elec.), and acid electric (A. Elec.).

F. Heat Treatment

The temperature, time of hold, and type of quench and draw are given in the firing record.

3. Electrode Data

These data are listed as given in each firing record.

A. Type

Since alloys are sometimes added in the coating, electrodes are typed according to the chemical analysis of the weld metal when given. The types are as follows:

A (Austenitic)

I Mn-Mo Modified 18/8 (Cr-Ni-Fe alloy)
Weld Analysis - at least 1% Mn and .3% Mo.

II Mn Modified 18/8 (Cr-Ni-Fe alloy)
Weld Analysis - at least 1% Mn and less than .3% Mo.

III Mo Modified 18/8 (Cr-Ni-Fe alloy)
Weld Analysis - at least .3% Mo and less than 1% Mn.

B. Current and Polarity

These are to be tabulated as DC straight (str.), DC reversed (rev.) or AC.

4. Joint Design

A. Groove, etc.

This item notes the type of groove - single vee (SV) bevel or double vee (DV) bevel - the included angle, and the width of the root face (RF).

B. Root Gap

This is the distance in inches between the plates as set up for welding.

C. Plate Preparation

This indicates whether the plate edges to be welded together were flame cut, ground, machined, buttered, etc.

5. Welding Procedure

A. Backing

Backing if used, i.e. back-up bar, chill, filler, and spacer strip is noted.

B. Deposition

Figure 1 shows how the weld is broken up into root, body, and crown types. The size electrode is noted with the number of passes, type of passes, and the current and voltage. Passes are divided into two kinds: (a) layer, if the pass bridges the gap; and (b) bead, if the pass does not bridge the gap. SB designates seal bead.

C. Total Welding Time, and Interpass Temperature

These are listed as given.

D. Remarks

Any comments on chipping, grinding, or other special techniques used, not noted above but which might affect ballistic properties of welded armor plate, are noted under "remarks".

6. Heat

Preheat and postheat of weldment are tabulated.

7. Ballistic Results

The type projectile used in testing is noted for each plate. Hits, velocity, and location of each, cracking and remarks on cracking, are recorded. Symbols used are as follows:

H.	- impact number
F/S	- feet per second
L.L.	- left leg
R.L.	- right leg
C.B.	- cross bar
LOC.	- location
R.	- right of
L.	- left of
X	- on weld
U	- above
D	- below
IMP	- running from or through impact
O	- not running from or through impact

Types of cracking:

I	- Weld (including weld, fusion zone, and heat-affected zone cracking within 1/8 inch from weld)
IV	- Star plate cracking
V	- Linear plate cracking

Cracking is measured on the back of the plate.

8. The remarks on cracking and results of radiographic examination are recorded in the last column. P signifies the welded plate passed radiographic inspection, and F that it failed.

SPECIFICATION REQUIREMENTS FOR "H" PLATES
WELDED WITH AUSTENITIC ELECTRODES

From 3 May 1944, to the present, the following requirements have been in effect (as abstracted from Specification AXS-497, Rev. 5, 15 December 1943).

"F-3. Ballistic tests. Test plates required by paragraph F-2a(1)a shall be supported solidly on each of the two sides parallel to the longest welds and with these welds upright. The plate shall be tested for compliance with the requirements of Table II.

TABLE II

Thickness of shock test plate, inches	Type of homogeneous armor	Projectile	Striking	Allowable
			velocity f/s, plus or minus 25 f/s	weld crack- ing, inches, maximum
1-1/2	rolled	75 mm. T21	1200	15
1-1/2	cast	"	1050	10
1	rolled	"	725	17
1	cast	57 mm. T1	975	6
3/4	rolled	"	800	12
1/2	rolled	37 mm. H.E. M54	2525	12
3/8	rolled	"	2025	15
1/4	rolled	"	1625	12

"F-3a. Cracks in the armor parallel to the weld and within 1/8 inch of the edge of the weld shall be considered in the total weld cracking.

"F-3b. All impact velocities specified for cast homogeneous armor are subject to variation depending on the actual armor thickness. This variation shall be based on the velocities specified for testing primary armor and results in velocity of 6 f/s for each increase of 0.01 inch in armor thickness.

"F-3c. Cracking of the plate outside a circle of 6 inches radius, the center of which is the center of impact, or plate cracks greater than 6 inches in length not passing through the point of impact shall be considered cause for reporting "no test". Other types of armor cracking which indicate that the test of the welding procedure is insufficient may also be cause for reporting "no test". The phrase "no test" is defined as that condition existing when the results of the ballistic test are such that it is impossible to arrive at a decision as to the acceptability of the welding procedure.

"F-3d. The impact of the 75 mm. proof projectile T21 or the 57 mm. proof projectile T1 shall touch the edge of the weld to be considered as conforming to the requirements of the test.

"F-3e. The impact of the 37 mm. H.E. projectile M54 shall be within 1-3/4 inches of the weld as measured from the center of the impact to the center of the weld to be considered as conforming to the requirements of the test.

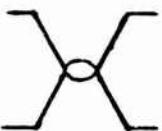
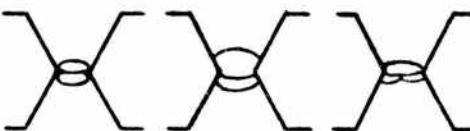
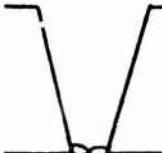
"F-3f. Impacts, the edges of which are more than 2 inches from the edge of the crossbar weld, which cause cracking in the crossbar either on the front or back of the plate, which is not an extension of cracking a leg weld, shall be cause for rejection of the welding procedure.

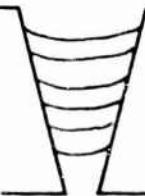
"F-3g. Any inconsistency in the quality of the welding procedure revealed by impact on a ballistic test plate may be considered cause for reporting "no test" at the discretion of the proof officer.

"F-3h. Any length of weld cracking revealed as a result of an impact outside the acceptable limits for impacts shall be cause for rejection of the welding procedure.

"F-3i. Impacts less than 6 inches from the top or bottom edge of the plate, which cause excessive weld cracking, shall be considered as not conforming to the requirements of the test. If, however, the cracking is not excessive and the requirements referred to in paragraph F-3d are met, the impact will be considered acceptable.

"F-3j. Thicknesses not covered by Table II shall be tested as directed by the Chief of Ordnance.

Root types	Type I	Type II
Double V bevel		 etc. More than one bead at root
Single V bevel		 etc. More than one bead bridging root gap

Body types	Type I	Type II	Type III	Type IV	Type V
Double V bevel				Unionmelt	Special
Single V bevel				Unionmelt	Special

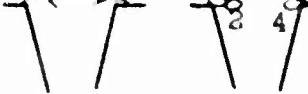
Crown types	Type I	Type II	Type III
Double V & Single V bevel			 etc.
	Single Crown Single pass bridges gap	Multiple Crown Last bead touches parent metal	Multiple Crown Last bead does not touch parent metal

Fig. 1 Weld Metal Deposition Types

IDENTIFICATION	APPENDIX DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	FATIGUE	BALLISTIC RESULTS	REMARKS ON CRACKING				
							A. BACKING	B. DEPOSITION SIZE EL. NO. TYPE AMP. V.	C. LOCATION OF H. LOC. TYPE ANT.	G. CRACKING	H. RADIOGRAPHIC RESULTS, ETC.
A. FIRING RECORD NO. B. DATE OF TEST C. PLATE NO. D. PLATE TYPE E. CARBON CONTENT F. MM. G. ARBOR MANUFACTURER H. ELECTRODE MFG. I. HEAT TREATMENT J. ANODE FABRICATOR K. TEMP. TIME QUENCH	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAS C. PLATE PREPARATION D. CURRENT & POLARITY	A. 45° SV B. 1/2"	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. DEPOSITION SIZE EL. NO. TYPE AMP. V.	A. BACKING B. PLATE PREPARATION C. PLATE PREPARATION	A. PRE B. POST	#	F/S	L.L. R.L. C.B.	LOC.		
A. AF 781 B. 8/9/43 C. 2 D. Youngstown Sheet & Tube Great Lakes Steel Corp. E. Crucible Steel Company F. ABES Baldwin Wyoming Co.	A. A. I. B. Hill Y C. 1.50in D. .1961 .044S .055P .25Mo .067T .25C Face 364 Back 364 B.C.H. F. 1600°F 2 hr. water 800°F 1/2 hr. water A. 1/2" B. R.T.W. 7 .98in .74S! .024S .019P .56CR .21Mo .27C D. Pace 375 Back 375 E. R.O.H. F. 1600°F 1/2 hr. water 900°F 1/2 hrs water	A. 1.05-1.10" 1.74-1.88" 2.27-2.2851 19.16-19.64 10.24-10.28 1.77-2.2860 B. Resistal C. Titanium D. - - -	A. 1. II 2. II 3. I Seal bead-3/16" 1a 180 22 C. 2 hours 190°-290° F D. Grinding time 4 hours.	A. COPPER B. Grinding C. Grinding	A. None B. None	1	2527	1 1/8"	5 1/2"	-	
						2	2533	R D	4"	IMP	1 2"
						3	2525	R D	4 1/2"	-	+ Imperfect fusion
						4	2533	1 1/2"	2 1/2"	U	2"

TEST IDENTIFICATION	ARCING DATA	ELECTRODE DATA	JOINT DESIGN	WELDING		PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING			
				A. BACKING	B. POST	A. PRE	B. POST	C. L.L.	D. L.L.	E. C.D.	F. LOC	G. TYPE	H. ANT
A. FIRING ACCORD NO. B. DATE OF TEST C. PLATE NO. D. ARMO MANUFACTURER E. ELECTRODE MFG. F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. SW E. PROCESS F. BEST TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. CURRENT E. POLARITY	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	B. DEPOSITION SIZE EL. NO. TYPE AMP. V. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE									
A. AD 454 B. P/2/43 C. P 22 D. Great Lakes Steel Corp. E. Harnischfeger F. Bullock Motor Division	A. 1" P B. H TV C. 1.14"-.075" D. .024S-.016P .022Cr-.21Mo .122Cr .50C Face 341 Back 341 E. B. O.H. F. 1650°F ± hr. water 85°F ± hrs. air	A. A. I .11C 1.62% 1.47% .0106 .030P 1.9.56C 10.41N 1.76Mo B. AW 3 C. Lime D. DC-REY	A. 60° DV B. 1/4" C. Flame cutting Grinding	A. Not given B. 1.82-.83. 1 3/16" 2A 140 22 C. 40 minutes. 75°-75°F D. Grinding time 3 minutes.									
A. AD 454 B. P/2/43 C. B 23 D. Great Lakes Steel Corp. E. Harnischfeger F. Bullock Motor Division	A. 1" P B. H TV C. 1.14"-.075" D. .024S-.016P .022Cr-.21Mo .122Cr .37C Face 341-243 Back 341-343 E. B. O.H. F. 1650°F ± hr. water 85°F ± hrs. air	A. A. I .11C 3.76% .45S1 .0106 .024P .122Cr .37C Face 341-243 Back 341-343 E. B. O.H. F. 1650°F ± hr. water 85°F ± hrs. air	A. 60° DV B. 1/4" C. Flame cutting Grinding	A. Not given B. 1.82-.83. 1 5/32" 1a 140 23 C. 40-1/2 minutes. 75°F-75°F D. Grinding time 4-1/2 mins.									

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA	JOINT DESIGN	BUILDING PROCEDURE	BALLISTIC RESULTS		MARKS ON CRACKING		
					A. PRE.	B. POST	C. VEL.	D. LOCATION OF II	
A. FILING NUMBER B. DATE OF TEST C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRODE SUP. F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. IRON E. PROCESSES F. HEAT TREATMENT TEMP. TIME QURETT	A. TYPE B. TRADE NAME C. COATING D. CURRENT A POLARITY	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. C. TYPE AMP. V. D. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. 11/16" DV 1.04-1.16Mo .26-.281 .03CS .014P .04Cr Tr. Mo .45C D. Face 341 Back 341 E. B.O.H. 1600°F 1 hr. air 1550°F 1 hr. caustic 825°F 2 hrs. air	B. 60° DV 5/16" C. Flame cutting .013-.024S .040-.041P 18.76-18.97 10.08Mn 2.01-2.35Mo .03-.06V B. Armorarc "B" C. Line D. DC-REV	C. 110 minutes, 75°-260°F D. Grinding time 5½ minutes.	A. Not Given B. None C. 11/16" 5/32" 2a 125 28 2.43 11 5/32" 2b 125 25 2b 130 25 394	A. None 1 B. None C. IMP I 62 P D. IMP IV 33
A. AD 378 B. 4/2/43 C. K 57 D. Republic Steel Corp. E. Alloy Rods Co. F. Buick Motor Division	A. 1/2" R V .90% .20S1 .036 .014P .04Cr Tr. Mo .45C D. Face 341 Back 341 E. B.O.H. 1600°F 1 hr. air 1550°F 1 hr. caustic 825°F 2 hrs. air	A. 11/16" DV .09C 3.52Mn B. 60° DV 5/16" C. Flame cutting .014P .0106 .042P D. Face 341 Back 341 E. B.O.H. 1600°F 1 hr. air 1550°F 1 hr. caustic 825°F 2 hrs. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. PRE. B. POST	A. Not Given B. None C. 11/16" 3/16" 1a 145 24 2. 5/32" 1a 126 21 3. 1 1/4" 2a 175 25 C. 78 minutes, 80°-165°F D. Grinding time 3½ minutes.	C. 11/16" 8" 0 1 2" L U 1" 10½" 1 11" R U 1" 10½" 1 11" R U 264	A. None 1 B. None C. IMP I 9" P D. IMP IV 24		
A. AD 378 B. 4/2/43 C. K 57 D. Republic Steel Corp. E. Alloy Rods Co. F. Buick Motor Division	A. 1/2" R V .90% .20S1 .036 .014P .04Cr Tr. Mo .45C D. Face 341 Back 341 E. B.O.H. 1600°F 1 hr. air 1550°F 1 hr. caustic 825°F 2 hrs. air	A. 11/16" DV .09C 3.52Mn B. 60° DV 5/16" C. Flame cutting .014P .0106 .042P D. Face 341 Back 341 E. B.O.H. 1600°F 1 hr. air 1550°F 1 hr. caustic 825°F 2 hrs. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. PRE. B. POST	A. Not Given B. None C. 11/16" 3/16" 1a 145 24 2. 5/32" 1a 126 21 3. 1 1/4" 2a 175 25 C. 78 minutes, 80°-165°F D. Grinding time 3½ minutes.	C. 11/16" 8" 0 1 2" L U 1" 10½" 1 11" R U 1" 10½" 1 11" R U 264	A. None 1 B. None C. IMP I 9" P D. IMP IV 24		

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN		WELDING PROCEDURE	TEST		BALLISTIC RESULTS		REMARKS OR CLACKING	
			A. TYPE	B. TRADE NAME	C. COATING	D. CURRENT	E. POLARITY	F. BEAT TREATMENT	G. TIME OF TEST	H. PAIR	I. POST
A. AD 378 B. 4/9/43 C. K-52 D. Republic Steel Corp. E. Alloy Rods Co. F. Buck Motor Division	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. NEW E. ELECTRODE WIRE. F. ARMOR ASSOCIATES	A. GROOVE, INCLINED B. ARCLE, ROOT FACE C. ROOT GAP D. CURRENT & E. PROCESSES F. BEAT TREATMENT TEMP. TIME OF TEST	A. BACKING	B. DEPOSITION RATE EL. SO. TYPE APP. V.	PASSED	L.S. L.L. R.L. C.B.	LOCATION OF #	TYPE	AMT		
A. AD 378 B. 4/9/43 C. K-52 D. Republic Steel Corp. E. Alloy Rods Co. F. Buck Motor Division	A. 1/2" B. R.V. .001"-.206" .03-.05".014" .04N1 TR.MO .04CT C. .45C D. Face 34.1 Back 34.1 E. B.C.H. F. 1000 F 1 hr. air 1550 F 1 hr. caustic 826 F 2 hrs. air	A. .60 ⁰ DV B. 1/4" C. Flame cutting	1. I 6/32" 2. I 5/32" 3. I 5/32"	1a 125 2a 130 2a 135 2a 135	21 22 22 22	2800 1 ¹ " 2800 1 ¹ " 1800 1 ¹ " 1800 1 ¹ "	R D U IMP V	1 ¹ " 1 ¹ " 1 ¹ " 1 ¹ "	IMP IMP D D	- - 0 1	P Plate is acceptable for soundness.
A. AD 378 B. 4/9/43 C. K-52 D. Republic Steel Corp. E. Alloy Rods Co. F. Buck Motor Division	A. A.I. B. R.V. .001"-.206" .03-.05".014" .04N1 TR.MO .04CT C. .45C D. Face 34.1 Back 34.1 E. B.C.H. F. 1000 F 1 hr. air 1550 F 1 hr. caustic 826 F 2 hrs. air	A. .60 ⁰ DV B. 1/4" C. Flame cutting	1. I 6/32" 2. I 6/32" 3. I 6/32"	1a 130 2a 125 2a 125	27 25 25	2800 1 ¹ " 2800 1 ¹ " 2800 1 ¹ " 2800 1 ¹ "	R D U IMP V	3 ¹ " 3 ¹ " 1 ¹ " 1 ¹ "	IMP IMP D D	- - 0 1	P Plate is acceptable for soundness.
A. AD 378 B. 4/9/43 C. K-52 D. Republic Steel Corp. E. Alloy Rods Co. F. Buck Motor Division	A. 1/2" B. R.V. .001"-.206" .03-.05".014" .04N1 TR.MO .04CT C. .45C D. Face 34.1 Back 34.1 E. B.C.H. F. 1000 F 1 hr. air 1550 F 1 hr. caustic 826 F 2 hrs. air	A. .60 ⁰ DV B. 1/4" C. Flame cutting	1. I 6/32" 2. I 6/32" 3. I 6/32"	1a 130 2a 125 2a 125	27 25 25	2800 1 ¹ " 2800 1 ¹ " 2800 1 ¹ " 2800 1 ¹ "	R D U IMP V	3 ¹ " 3 ¹ " 1 ¹ " 1 ¹ "	IMP IMP D D	- - 0 1	P Plate is acceptable for soundness.

IDENTIFICATION	ADDITIONAL DATA	ELECTRODE DATA	JOINT ACTION		WELDING PROCEDURE	TEST	BALLISTIC RESULTS		RELEASES OF CRACKING		RADIOGRAPHIC RESULTS	
			A. GROOVE, INCLUDED ANGLE	B. TRADE NAME			C. COATING	D. CEMENT & POLARITY	E. DEPOSITION SIZE IN. NO. TIP AMP. V.	F. PLATE S.	G. PLATE S.	H. LOC. TIPS AIR
A. RIBBON NUMBER B. DATE OF TEST C. PLATE NO. D. AMM. MANUFACTURER E. ELECTRODE SPEC. F. AMM. FABRICATOR	4. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. BEAM E. PROCESS F. HEAT TREATMENT TEMP. TIME OPERATE	A. TYPE B. TRADE NAME C. COATING D. CEMENT & POLARITY	A. BACKING B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. TRADE NAME C. COATING D. CEMENT & POLARITY	B. DEPOSITION SIZE IN. NO. TIP AMP. V.							
A. AD 378 B. 4/9/43 C. K 50 D. Republic Steel Corp. E. Alloy Rods Co. F. Buick Motors Division	A. 1/2" B. R. V. C. .020 in. D. .0308 E. .014 P F. .04CR .04Ni trace Mo 10.0Ni 2.0Mo .05Cu B. Armorarc C. .45C D. Pace 341 E. Back 341 F. B.O.H. G. 1600 F 1 hr. H. 1550 F 1 hr. I. caustic J. 225 F 2 hrs. K. air	A. A. I B. .06C C. .2681 D. .024S E. .014P F. .04CR .04Ni trace Mo 10.0Ni 2.0Mo .05Cu B. Armorarc C. Line D. DC-REV	A. Not given B. 60° DV C. Flame cutting	A. 60° DV B. 1/4" C. Flame cutting	1. 1 5/32" 18 126 21 2. 1 5/32" 28 126 21 3. 1 5/32" 28 130 21							
A. AD 378 B. 4/9/43 C. K 51 D. Republic Steel Corp. E. Alloy Rods Co. F. Buick Motor Division	A. 1/2" B. R. V. C. .020 in. D. .0308 E. .014 P F. .04CR .04Ni trace Mo 10.0Ni 2.0Mo .05Cu B. Armorarc C. .45C D. Pace 341 E. Back 341 F. B.O.H. G. 1600 F H. 1550 F 1 hr. I. caustic J. 225 F 2 hrs. K. air	A. A. I B. .10C C. .2281 D. .0125 E. .04CR F. .04C G. .04CR H. .04V I. .08C J. 1600 F K. 225 F 2 hrs. L. air	A. Not given B. 60° DV C. Flame cutting	A. 60° DV B. 1/4" C. Flame cutting	1. 1 5/32" 18 126 21 2. 1 5/32" 18 130 21 3. 1 5/32" 28 130 21							
A. AD 378 B. 4/9/43 C. K 51 D. Republic Steel Corp. E. Alloy Rods Co. F. Buick Motor Division	A. 1/2" B. R. V. C. .020 in. D. .0308 E. .014 P F. .04CR .04Ni trace Mo 10.0Ni 2.0Mo .05Cu B. Armorarc C. .45C D. Pace 341 E. Back 341 F. B.O.H. G. 1600 F H. 1550 F 1 hr. I. caustic J. 225 F 2 hrs. K. air	A. A. I B. .10C C. .2281 D. .0125 E. .04CR F. .04C G. .04CR H. .04V I. .08C J. 1600 F K. 225 F 2 hrs. L. air	A. Not given B. 60° DV C. Flame cutting	A. 60° DV B. 1/4" C. Flame cutting	1. 1 5/32" 18 126 21 2. 1 5/32" 18 130 21 3. 1 5/32" 28 130 21							

IDENTIFICATION	APPROV. DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	TEST	BALLISTIC RESULTS			REMARKS ON CRACKING RADIOGRAPHIC RESULTS, ETC.
							A. TYPE	B. TRADE NAME	C. COATING	D. CURRENT A. POLARITY
A. FIRING NUMBER B. DATE OF TEST C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRODE MANUF. F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. IRON E. PROCEDURE F. REATT TREATMENT TEMP. TIME QUENCH	A. GROOVE, INCLUDED ANGLE, ROOT FACE N. ROOT GAP	A. BACKING C. PLATE PREPARATION	A. DEPOSITION SIZE EL. NO. TYPE AMP. V.	F. PASSES	G. POST	A. PNE B. None	L. L. R. L. C. B. LOC. TYPE AMT	I. CRACKING	
A. AD 388 B. 4/21/43 C. 15 D. Great Lakes Steel Corp. E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. TV .83Ph .68S1 .025S .025P .88Cr .15Mo .08Cr C. .28C D. Pace 341 Back 388 E. B.O.H. F. 1600F + hr. water 6F + hr. 850F + hr. air	A. A II B. AW 3 C. Lime D. DC-REV	A. 60° DV B. 5/16"	A. Not given	1. 1 5/32" 2. 1 5/32" 3. 1 6/32"	1a 130 27 2a 135 28 2a 135 28	2800 4½" U	2800 4½" D	2800 4½" D	P
A. AD 388 B. 4/21/43 C. 17 D. Jones & Laughlin E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R III 1.50Mn .2031 .0175 .016P .32Mo C. .25C D. Pace 341 Back 388 E. B.O.H. F. 1600F + hr. water 6F + hr. 800F + hr. air	A. A I B. AW 3 C. Lime D. DC-REV	A. 60° DV B. 5/16"	A. Not given	1. 1 5/32" 2. 1 5/32" 3. 1 5/32"	1a 125 21 2a 135 22 2a 145 23	2800 4½" R	2800 4½" U	2800 4½" U	P
A. AD 414 B. 5/7/43 C. 16 D. Jones & Laughlin E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R 1.50Mn .2061 .32Mo C. .25C D. Pace 341 Back 388 E. B.O.H. F. 1600F + hr. water 6F + hr. air	A. A I B. .08C 3.77Mn .56S1 18.51Cr 9.88Ni .70Mo B. AW 3C C. Lime D. DC-REV	A. 60° DV B. 5/16"	A. Not given	1. 1 5/32" 2. 1 5/32" 3. 1 5/32"	1a 125 21 1a 140 23 1a 125 22 1a 140 23 1a 160 24	2800 4½" R	2800 4½" L	2800 X X IMP	P

IDENTIFICATION	ARCER DATA		ELECTRODE DATA		JOINT DESIGN		WELDING PROCEDURE		HEAT		FRACTURE RESULTS		MARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.		
	A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. MIN.	E. PROCESS	F. HEAT TREATMENT TEMP. TIME QUENCH	G. BACKING	H. INCLUDED ANGLE, ROOT FACE	I. ROOT GAP	J. DEPOSITION SIZE EL.	K. NO. TYPE AMP. V.	L. PASSES	M. POST	N. LOC.	O. LOC.	P. TYPE & AMT.	Q. CRACKING
A. AD 414 B. 5/7/43 C. C 18 D. Great Lakes Steel Corp. E. Harnischfeger Corp. F. Buick Motor Corp.	A. 1/2" B. R IV C. .83 Mn D. .025 S E. .024 P F. .15 Mo G. .29 C H. .341 Face I. B.O.H. J. Water K. 850 F ± hr. L. air	A. A I B. AW3-C C. Lime D. DC-REV	A. 80° DV B. 5/16" DV C. Flame cutting	A. Not given B. 1. 1 5/32" 1a 135 26 2. 1 5/32" 1a 135 26 3. 1 5/32" 1a 140 25 2800 2 1/2" R 3. 2800 1/2" L	A. None B. None	1 2800 X 15 IMP D 1 13 1/2" P 2 2800 2 1/2" R U - - - 3 2800 1/2" L D 10 IMP D 1 4 1/2" 17 1/2"											
A. AD 414 B. 5/7/43 C. C 18 D. Great Lakes Steel Corp. E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R IV C. .83 Mn D. .025 S E. .024 P F. .15 Mo G. .29 C H. .341 Face I. B.O.H. J. Water K. 850 F ± hr. L. air	A. A I B. AW3-C C. Lime D. DC-REV	A. 80° DV B. 5/16" DV C. Flame cutting	A. Not given B. 1. 1 5/32" 1a 125 25 2. 1 5/32" 2a 130 25 3. 1 5/32" 1a 135 26 4. 1 5/32" 1a 150 27 2800 1/2" R 6 1/2" R 4 1/2" P 3 2800 1/2" L D 6 1/2" R 4 1/2" P 4 2800 1/2" R 6 1/2" R 4 1/2" P 5 2800 1/2" L D 6 1/2" R 4 1/2" P 6 2800 3 1/2" L D 6 1/2" R 4 1/2" P 7 2800 4 1/2" L D 6 1/2" R 4 1/2" P 8 2800 4 1/2" L D 6 1/2" R 4 1/2" P	A. None B. None	1 2800 4 1/2" R 3 1/2" U 3 1/2" P 2 2800 1/2" R 3 1/2" D 3 1/2" P 3 2800 1/2" L D 3 1/2" P 4 2800 1/2" R 3 1/2" D 3 1/2" P 5 2800 1/2" L D 3 1/2" P 6 2800 3 1/2" L D 3 1/2" P 7 2800 4 1/2" L D 3 1/2" P 8 2800 4 1/2" L D 3 1/2" P											

IDENTIFICATION		ARMOR DATA		PLATE/ROD DATA		JOINT DESIGN		WELDING		PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING		
A. FIRING RECORD NO.	B. DATE OF TEST	C. CARBON CONTENT	D. BMH	E. ELECTRODE BMGR	F. REIN FABRICATOR	G. PLATE THICKNESS	H. TRADE NAME	I. TYPE	J. ANGLE - ROOT FACE	K. ROOT CAP	L. DEPOSITION SIZE EL. NO. TYPE AMP. V.	M. PRE-POST	N. VEL.	O. LOCATION OF H	P. CRACKING	Q. RADIOGRAPHIC RESULTS ETC
A. AL 414	B. 6/7/43	C. .20	D. Jones	E. Laufolin Steel	F. Hamischreger	G. 1/2"	H. A-7	I. AC	J. 5/16"	K. Not given	L. 5/32" 18	M. 130	N. 51"	O. U	P. -	
											2. 5/32"	24	130-135	51"	12"	
											3. 5/32"	18	135	51"	-	
											4. 5/32"	18	135	51"	-	
											5. 5/32"	18	135	51"	-	
											6. 5/32"	18	135	51"	-	
											7. 5/32"	18	135	51"	-	
											8. 5/32"	18	135	51"	-	
											9. 5/32"	18	135	51"	-	
											10. 5/32"	18	135	51"	-	
											11. 5/32"	18	135	51"	-	
											12. 5/32"	18	135	51"	-	
											13. 5/32"	18	135	51"	-	
											14. 5/32"	18	135	51"	-	
											15. 5/32"	18	135	51"	-	
											16. 5/32"	18	135	51"	-	
											17. 5/32"	18	135	51"	-	
											18. 5/32"	18	135	51"	-	
											19. 5/32"	18	135	51"	-	
											20. 5/32"	18	135	51"	-	
											21. 5/32"	18	135	51"	-	
											22. 5/32"	18	135	51"	-	
											23. 5/32"	18	135	51"	-	
											24. 5/32"	18	135	51"	-	
											25. 5/32"	18	135	51"	-	
											26. 5/32"	18	135	51"	-	
											27. 5/32"	18	135	51"	-	
											28. 5/32"	18	135	51"	-	
											29. 5/32"	18	135	51"	-	
											30. 5/32"	18	135	51"	-	
											31. 5/32"	18	135	51"	-	
											32. 5/32"	18	135	51"	-	
											33. 5/32"	18	135	51"	-	
											34. 5/32"	18	135	51"	-	
											35. 5/32"	18	135	51"	-	
											36. 5/32"	18	135	51"	-	
											37. 5/32"	18	135	51"	-	
											38. 5/32"	18	135	51"	-	
											39. 5/32"	18	135	51"	-	
											40. 5/32"	18	135	51"	-	
											41. 5/32"	18	135	51"	-	
											42. 5/32"	18	135	51"	-	
											43. 5/32"	18	135	51"	-	
											44. 5/32"	18	135	51"	-	
											45. 5/32"	18	135	51"	-	
											46. 5/32"	18	135	51"	-	
											47. 5/32"	18	135	51"	-	
											48. 5/32"	18	135	51"	-	
											49. 5/32"	18	135	51"	-	
											50. 5/32"	18	135	51"	-	
											51. 5/32"	18	135	51"	-	
											52. 5/32"	18	135	51"	-	
											53. 5/32"	18	135	51"	-	
											54. 5/32"	18	135	51"	-	
											55. 5/32"	18	135	51"	-	
											56. 5/32"	18	135	51"	-	
											57. 5/32"	18	135	51"	-	
											58. 5/32"	18	135	51"	-	
											59. 5/32"	18	135	51"	-	
											60. 5/32"	18	135	51"	-	
											61. 5/32"	18	135	51"	-	
											62. 5/32"	18	135	51"	-	
											63. 5/32"	18	135	51"	-	
											64. 5/32"	18	135	51"	-	
											65. 5/32"	18	135	51"	-	
											66. 5/32"	18	135	51"	-	
											67. 5/32"	18	135	51"	-	
											68. 5/32"	18	135	51"	-	
											69. 5/32"	18	135	51"	-	
											70. 5/32"	18	135	51"	-	
											71. 5/32"	18	135	51"	-	
											72. 5/32"	18	135	51"	-	
											73. 5/32"	18	135	51"	-	
											74. 5/32"	18	135	51"	-	
											75. 5/32"	18	135	51"	-	
											76. 5/32"	18	135	51"	-	
											77. 5/32"	18	135	51"	-	
											78. 5/32"	18	135	51"	-	
											79. 5/32"	18	135	51"	-	
											80. 5/32"	18	135	51"	-	
											81. 5/32"	18	135	51"	-	
											82. 5/32"	18	135	51"	-	
											83. 5/32"	18	135	51"	-	
											84. 5/32"	18	135	51"	-	
											85. 5/32"	18	135	51"	-	
											86. 5/32"	18	135	51"	-	
											87. 5/32"	18	135	51"	-	
											88. 5/32"	18	135	51"	-	
											89. 5/32"	18	135	51"	-	
											90. 5/32"	18	135	51"	-	
											91. 5/32"	18	135	51"	-	
											92. 5/32"	18	135	51"	-	
											93. 5/32"	18	135	51"	-	
											94. 5/32"	18	135	51"	-	
											95. 5/32"	18	135	51"	-	
											96. 5/32"	18	135	51"	-	
											97. 5/32"	18	135	51"	-	
											98. 5/32"	18	135	51"	-	
											99. 5/32"	18	135	51"	-	
											100. 5/32"	18	135	51"	-	
											101. 5/32"	18	135	51"	-	
											102. 5/32"	18	135	51"	-	
											103. 5/32"	18	135	51"	-	
											104. 5/32"	18	135	51"	-	
											105. 5/32"	18	135	51"	-	
											106. 5/32"	18	135	51"	-	
											107. 5/32"	18	135	51"	-	
											108. 5/32"	18	135	51"	-	
											109. 5/32"	18	135	51"	-	
											110. 5/32"	18	135	51"	-	
											111. 5/32"	18	135	51"	-	
											112. 5/32"	18	135	51"	-	
											113. 5/32"	18	135	51"	-	
											114. 5/32"	18	135	51"	-	
											115. 5/32"	18	135	51"	-	
											116. 5/32"	18	135	51"	-	
											117. 5/32"	18	135	51"	-	

IDENTIFICATION	ABSORB DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS		REMARKS ON CRACKING					
					A. TYPE	B. TRADE NAME	C. COATING	D. ROOT GAP	E. PLATE PREPARATION	F. DEPOSITION SIZE EL.	G. NO. TYPE AMP. V.	H. LOCATION OF H
A. AD 398 B. 6/2/43 C. 23 D. Youngstown Sheet & Tube Corp. E. Parnischreger Corp. F. Buick Motor Division	A. PLATE THICKNESS B. R. I.I. C. 1.50 in. D. .23S1 E. .024S-.024P F. .44Mo G. .26C H. Face 383-375 I. Back 383-375 J. Face 383-375 K. Back 383-375 L. Water M. 1600 F + hr. N. 950 F 1 hr. O. AW 3 P. Lime Q. DC-REV	A. A. I B. 1.15C C. 1.48M D. .4781 E. .011S F. .033P G. 20.035F H. 10.21NI I. 1.84Mo J. .05V K. Not given L. Flame cutting	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. MIG, TIG, ERW, SAW, GMAW, FCAW, PAW, PAW-V, PAW-PP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. DEPOSITION SIZE EL. C. PLATE PREPARATION D. GROOVE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE F. REMARKS	A. PRE B. POST	F/S L.T. R.L.	C.B.	LOC.	TYPE AND ANT.			
A. AD 398 B. 6/2/43 C. 24 D. Youngstown Sheet & Tube Corp. E. Parnischreger Corp. F. Buick Motor Division	A. 1/2" B. R. I.I. C. 1.64M D. .26C E. .017S F. .44Mo G. .26C H. Face 383-375 I. Back 383-375 J. Face 383-375 K. Back 383-375 L. Water M. 1600 F + hr. N. 950 F 1 hr. O. AW 3 P. Lime Q. DC-REV	A. A. I B. 5/16" C. 1.48M D. .4781 E. .011S F. .033P G. 20.035F H. 10.21NI I. 1.84Mo J. .05V K. Not given L. Flame cutting	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. MIG, TIG, ERW, SAW, GMAW, FCAW, PAW, PAW-V, PAW-PP C. PLATE PREPARATION D. GROOVE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE F. REMARKS	A. BACKING B. DEPOSITION SIZE EL. C. PLATE PREPARATION D. GROOVE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE F. REMARKS	A. PRE B. POST	F/S L.T. R.L.	C.B.	LOC.	TYPE AND ANT.			
A. AD 398 B. 6/2/43 C. 27 D. Youngstown Sheet & Tube Corp. E. Parnischreger Corp. F. Buick Motor Division	A. 1/2" B. R. I.I. C. 1.60M D. .26C E. .0161 F. .4781 G. .011S H. .033P I. .033P J. .25C K. Face 352-363 L. Back 352-363 M. B.C.H. N. 1600 F + hr. O. 900 F + hr. P. DC-REV	A. A. I B. 5/16" C. 1.48M D. .4781 E. .011S F. .033P G. 20.035F H. 10.21NI I. 1.84Mo J. .05V K. Not given L. Flame cutting	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. MIG, TIG, ERW, SAW, GMAW, FCAW, PAW, PAW-V, PAW-PP C. PLATE PREPARATION D. GROOVE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE F. REMARKS	A. BACKING B. DEPOSITION SIZE EL. C. PLATE PREPARATION D. GROOVE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE F. REMARKS	A. PRE B. POST	F/S L.T. R.L.	C.B.	LOC.	TYPE AND ANT.			

IDENTIFICATION	ARMOR DATA		ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING				
	A. PLATE THICKNESS	B. TYPE	A. TYPE	B. TRADE NAME	C. COATING	D. CURRENT	E. POLARITY	F. HEAT TREATMENT	G. ROOT GAP	H. ANGLE	I. ROOT FACE	J. DEPOSITION SIZE	K. NO. OF PASSES	L. TYPE AMP.	M. LOC.	N. L.	O. C. B.	P. LOC.	Q. TYPE
A. AD 825 B. 10/9/43 C. K 59 D. Republic Steel Corp. E. Harnischfreger Corp. F. Buick Motor Division	A. 1/2" B. F V .900" .2081 .0306 .014P .04CR .04N1 Trace Mo .45C D. Face 331-341 Back 331-341 E. B.O.H. F. 1700°F 1 hr. air 1000°F 1 hr. caustic 860°F 2 hrs. air	A. A I B. .09C .014P .04N1 Trace Mo .45C D. Face 331-341 Back 331-341 E. B.O.H. F. 1700°F 1 hr. air 1000°F 1 hr. caustic 860°F 2 hrs. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. .09C 3.77mm .5681 .008S .032P 18.59CR 9.86N1 .70HO AW3-C Lime DC-PEV	A. BACKING B. .09C 3.77mm .5681 .008S .032P 18.59CR 9.86N1 .70HO AW3-C Lime DC-PEV	A. DEPOSITION SIZE 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS	A. DEPOSITION SIZE 1. II 5/32" 2A 140 25 2. I 5/32" 2A 140 25 C. 78 minutes. 75°-195°F D. Grinding time 8½ mins.	A. PRE B. POST	A. VZL B. VZL C. VZL	A. LOCATION OF R B. LOCATION OF R C. LOCATION OF R	A. CRACKING B. CRACKING C. CRACKING	A. IMP B. IMP C. IMP	A. P B. P C. P							
A. AD 825 B. 10/9/43 C. K 60 D. Republic Steel Corp. E. Harnischfreger Corp. F. Buick Motor Division	A. 1/2" B. F V .900" .2081 .0306 .014P .04CR .04N1 Trace Mo .45C D. Face 331-341 Back 331-341 E. B.O.H. F. 1700°F 1 hr. air 1000°F 1 hr. caustic 860°F 2 hrs. air	A. A I B. .09C .014P .04N1 Trace Mo .45C D. Face 331-341 Back 331-341 E. B.O.H. F. 1700°F 1 hr. air 1000°F 1 hr. caustic 860°F 2 hrs. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. .09C 3.77mm .5681 .008S .032P 18.59CR 9.86N1 .70HO AW3-C Lime DC-PEV	A. BACKING B. .09C 3.77mm .5681 .008S .032P 18.59CR 9.86N1 .70HO AW3-C Lime DC-PEV	A. DEPOSITION SIZE 1. II 5/32" 2A 130-140 2. I 5/32" 2A 145 25 C. 90 minutes. 75°-195°F D. Grinding time 7½ minutes.	A. PRE B. POST	A. VZL B. VZL C. VZL	A. LOCATION OF R B. LOCATION OF R C. LOCATION OF R	A. CRACKING B. CRACKING C. CRACKING	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. P B. P C. P		
A. AD 826 B. 10/9/43 C. F 61 D. Republic Steel Corp. E. Harnischfreger Corp. F. Buick Motor Division	A. 1/2" B. R V .900" .2081 .0606 .014P .04CR .04N1 Trace Mo .45C D. Face 341 Back 341 E. B.O.H. F. 1700°F 1 hr. air 1650°F 1 hr. caustic 860°F 2 hrs. air	A. A I B. .09C .014P .04N1 Trace Mo .45C D. Face 341 Back 341 E. B.O.H. F. 1700°F 1 hr. air 1650°F 1 hr. caustic 860°F 2 hrs. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. .09C 3.77mm .5681 .008S .032P 18.59CR 9.86N1 .70HO AW3-C Lime DC-PEV	A. BACKING B. .09C 3.77mm .5681 .008S .032P 18.59CR 9.86N1 .70HO AW3-C Lime DC-PEV	A. DEPOSITION SIZE 1. II 5/32" 2A 23-25 2. I 5/32" 2A 145 25 C. 90 minutes. 75°-195°F D. Grinding time 7½ minutes.	A. PRE B. POST	A. VZL B. VZL C. VZL	A. LOCATION OF R B. LOCATION OF R C. LOCATION OF R	A. CRACKING B. CRACKING C. CRACKING	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. IMP B. IMP C. IMP	A. P B. P C. P		

IDENTIFICATION	ARBOR DATA		ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.			
	A. PLATE THICKNESS	B. TYPE	A. TYPE	B. TRADE NAME	C. CARBON CONTENT	D. BHN	E. PROCESS	F. HEAT TREATMENT	G. CURENT S	H. POLARITY	I. ANGLE, ROOT FACE	J. ROOT CAP	K. PLATE PREPARATION	L. DEPOSITION SIZE EL.	M. NO. TYPE ARP. V.	N. VEL. F/S L-L. C. B.	O. LOCATION OF B	P. CRACKING	Q. LOC.	R. TYPE
A. AD 825 B. 10/9/43 C. K-62 D. Republic Steel Corp. E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R.V. C. .027"-.5051 D. .016"-.012P E. .270"-.50N1 F. .12M0 G. .33C H. Face 362 I. Back 352 J. 1650°F 2 hrs. K. Water L. 860°F 3 hrs. M. air	A. A. I B. .090" DV C. 3.00% D. .41S1 E. .010E F. .034P G. 20.39C H. 9.70M1 I. .82M0 J. AW3-C K. Lime L. DC-REV M. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	E. A. BACKING F. DEPOSITION SIZE EL.	G. PLATE PREPARATION	H. A. PRE- B. POST	I. PASSES	J. NO. TYPE ARP. V.	K. VEL. F/S L-L. C. B.	L. LOCATION OF B	M. CRACKING	N. LOC.	O. TYPE	P. AMT	Q. LOC.	R. TYPE	S. AMT
A. AD 825 B. 10/9/43 C. K-63 D. Republic Steel Co. E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R.V. C. .027"-.58S1 D. .016"-.014P E. .280"-.50N1 F. .13M0 G. .33C H. Face 352 I. Back 352 J. 1650°F 2 hrs. K. Water L. 860°F 3 hrs. M. air	A. A. I B. .090" DV C. 3.00% D. .41S1 E. .010S F. .034P G. 20.38C H. 9.70M1 I. .82M0 J. AW3-C K. Lime L. DC-REV M. air	A. Not given B. Flame cutting	C. Flame cutting	D. Remarks	E. 1. 11 5/32" 2a 145 32 2. 1 5/32" 2a 145 22 C. 82 minutes. 75°-155°F D. Grinding time 6½ minutes	F. 1. 1 5/32" 2a 145 32 2. 1 5/32" 2a 145 22 C. 82 minutes. 75°-155°F D. Grinding time 6½ minutes	G. 1. 2527 5/8" R 2. 2525 7/8" R 3. 2523 13/16" R	H. 1. 2527 5/8" R 2. 2525 7/8" R 3. 2523 13/16" R	I. 1. IMP 1 144°F 2. IMP 1 144°F 3. IMP 1 144°F	J. -	K. -	L. -	M. -	N. -	O. -	P. -	Q. -	R. -	S. -
A. AD 826 B. 10/9/43 C. K-63 D. Republic Steel Co. E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R.V. C. .027"-.58S1 D. .016"-.014P E. .280"-.50N1 F. .13M0 G. .33C H. Face 352 I. Back 352 J. 1650°F 2 hrs. K. Water L. 860°F 3 hrs. M. air	A. A. I B. .090" DV C. 3.00% D. .41S1 E. .010S F. .034P G. 20.38C H. 9.70M1 I. .82M0 J. AW3-C K. Lime L. DC-REV M. air	A. Not given B. Flame cutting	C. Flame cutting	D. Remarks	E. 1. 1 5/32" 1a 135 30 2. 1 5/32" 1a 145 31 3. 1 5/32" 1a 135 30 C. 82 minutes. 75°-136°F D. Grinding time 7 minutes	F. 1. 2528 11/16" R 2. 2549 1" R 3. 2549 1" R	G. 1. 2528 11/16" R 2. 2549 1" R 3. 2549 1" R	H. 1. IMP 1 228°F 2. IMP 1 152°F 3. IMP 1 428°F	I. -	J. -	K. -	L. -	M. -	N. -	O. -	P. -	Q. -	R. -	S. -
A. AD 824 B. 10/9/43 C. K-28 D. Jones & Laughlin E. Harnischfeger Corp. F. Buick Motor Division	A. 1/2" B. R.V. C. .027"-.11S1 D. .018P E. .280"-.008S F. .13M0 G. .33C H. Face 341-352 I. Back 341-352 J. 1650°F 3 hr. K. Water L. 860°F 1½ hr. M. air	A. A. I B. .090" DV C. 3.00% D. .50S1 E. .008S F. .032P G. 18.57C H. 9.88M1 I. .70M0 J. AW3-C K. Lime L. DC-REV M. air	A. Not given B. Flame cutting	C. Flame cutting	D. Remarks	E. 1. 1 5/32" 1a 120 25 2. 1 5/32" 2a 125 25 3. 1 5/32" 2a 130 25 C. 83 minutes. 70°-160°F D. Grinding time 9½ mins.	F. 1. 2514 61/2" U 2. 2519 12" R	G. 1. 2514 61/2" U 2. 2519 12" R	H. 1. IMP 1 174°F 2. 0 1 5/8" D	I. -	J. -	K. -	L. -	M. -	N. -	O. -	P. -	Q. -	R. -	S. -

TEST IDENTIFICATION	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING	RADIOPHASIC RESULTS, ETC.			
	A. PLATE THICKNESS	B. TYPE	C. COATING	D. ELECTRODE NO.	E. PROCESS	F. MEAT TREATMENT TEMP.	G. TIME QUENCH	H. BACKING	I. GROOVE, INCLUDED ANGLE, ROOT FACE	J. DEPOSITION SIZE EL. NO.	K. TYPE AMP. V	L. ROOT TYPE	M. BODY TYPE	N. LOCATION OF B	O. CRACK / NO. LOC.
A. A 11306 B. 12/14/43 C. Kee D. Republic Steel Corp. E. Farmischreger Corp. F. Buick Motor Division G. B.O.H. H. 1650 F 1 hr. I. water 660 F 2 hrs. J. water	A. A .12C B. R.V. C. .035in .57S1 D. .016S .014P E. .26Cr .49Ni F. .21NiC G. .33C H. Pace 352 I. Back 352 J. B.O.H. K. 1650 F 1 hr. L. water 660 F 2 hrs. M. water	A. A .1 B. .12C C. .350in D. .3861 E. .016S F. .031P G. 20.23Cr H. 9.00Ni I. .86Mo J. AW 3-C K. Lime L. DC-REV	A. 80° DV B. 5/16" S C. Flame cutting	I. I 3/16" 1a 180 22 II 5/32" 1a 150 21 III & IV 3/16" 2a 175 22 V 50 minutes. 70°-190°F VI Grinding time 7 minutes.	A. Not given B. Not given	A. None B. None	N 10 2507 I 11 2519 II 12 2521 III 12 2521	1 1/2" U 1 1/2" D 5" U 5" D	1 1/2" U 1 1/2" D 5" U 5" D	1 1/2" U 1 1/2" D 5" U 5" D	P G -	-	-	-	-
A. A 12304 B. 1/4/44 C. Kee D. Republic Steel Corp. E. Farmischreger Corp. F. Buick Motor Division G. B.O.H. H. 1650 F 1 hr. I. water 660 F 2 hrs. J. water	A. A .1 B. R.V. C. .035in .24S1 D. .022S .04N E. .40Cr .42Ni F. .28Ni G. .23C H. Pace 352 I. Back 352 J. B.O.H. K. 1650 F 1 hr. L. water 660 F 2 hrs. M. water	A. 80° DV B. 1/4" S C. Flame cutting	I. I 5/32" 1a 130 24 II 5/32" 1a 125 24 III & IV 5/32" 2a 125 24 V 80 minutes. 70°-190°F VI Grinding time 8 minutes	A. Not given B. Not given	A. None B. None	N 7 2522 I 8 2522 II 9 2522 III 9 2522 IV 9 2522 V 9 2522 VI 9 2522	2 1/2" U 2 1/2" D 1 1/2" U 1 1/2" D 1 1/2" U 1 1/2" D 0 0	2 1/2" U 2 1/2" D 1 1/2" U 1 1/2" D 1 1/2" U 1 1/2" D 0 0	2 1/2" U 2 1/2" D 1 1/2" U 1 1/2" D 1 1/2" U 1 1/2" D 0 0	P -	-	-	-	-	
A. A 12859 B. 3/13/44 C. Kee D. Republic Steel Corp. E. Crucible Steel Co. F. Buick Motor Division	A. A .12" B. R.V. C. .035in .26S1 D. .023S .012P E. .45Cr .44Ni F. .14Mo G. .34C H. Pace 352 I. Back 352 J. B.O.H. K. 1650 F 2 hrs. L. water 660 F 3 hrs. M. water	A. 80° DV B. 3/16" S C. Flame cutting D. Grinding	I. I 5/32" 1a 106 18 II 5/32" 1a 150 22 III 1/4" 2a 180 28 IV .008-.022S V .008-.022S VI 18.7- VII 21.00Cr VIII 9.4-9.5M IX .98-1.0EMO X Armorize XI Titanium XII DC-REV	A. Not given B. Not given	A. None B. None	N 4 2514 I 5 2524 II 5 2524 III 5 2524 IV 5 2524 V 5 2524 VI 5 2524 VII 5 2524	2 1/2" U 2 1/2" D 1 1/2" U 1 1/2" D 1 1/2" U 1 1/2" D 0 0	2 1/2" U 2 1/2" D 1 1/2" U 1 1/2" D 1 1/2" U 1 1/2" D 0 0	2 1/2" U 2 1/2" D 1 1/2" U 1 1/2" D 1 1/2" U 1 1/2" D 0 0	P -	-	-	-	-	

IDENTIFICATION	JOINT DESIGN DATA	WELDING DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS		MARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.												
					A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. NICKEL	E. PROCESS	F. BELT TREATMENT	G. TIME QUENCH	H. BACKING	I. GROOVE INCLUDED ANGLE, ROOT FACE	J. ROOT CAP	K. PLATE PREPARATION	L. ROOT TYPE	M. BODY TYPE	N. CROWN TYPE	O. TOTAL WELDING TIME & INTER PASS TEMPERATURE	P. REHEAT	4. PRE POST
A. AD 711 B. 6/26/45 C. 159 D. Great Lakes Steel Corp. E. McRay Company F. Cadillac Motor Car Div. G. 1/2"	A. .171 B. R IV .777" .0881 .0325 .017P .58CT N11 N1 .25Mo .02P C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. 60° DV B. 3/16" 3.75-.65Ht C. Flame cutting Or Indning D. .06P E. 19.60-.00.20 Cr 10.10-10.80 Cr Tr. Mo--.36 N1 F. 1650°F + hr. water 860°F + hr. air	A. Groove B. Trade back Coating C. Current A D. Polarity	A. Not Given B. 3/16" 3.75-.65Ht C. Flame cutting 1. 4. 2. 1 1/8" 28 90 3. 1 3/16" 28 185 25 D. Grinding	A. None B. None	1 2580	1 11/8	IMP 1	1 11/8	P											
A. AD 711 B. 6/26/45 C. 159 D. Great Lakes Steel Corp. E. Harnischfeger F. Cadillac Motor Car Div. G. 1/2"	A. .171 B. R IV .777" .0881 .0325 .017P .68CT N11 N1 .25Mo .02P C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. 60° DV B. 3/16" .12C 2.18Ht C. Grinding D. DC-REV	A. Not Given B. 3/16" 3.75-.65Ht C. Flame cutting 1. 4. 2. 1 6/32" 28 135 25 3. 1 3/16" 28 185 25 D. Grinding	A. None B. None	1 2584	1 11/8	IMP 1	1 11/8	P												
A. AD 711 B. 6/26/45 C. 159 D. Great Lakes Steel Corp. E. Harnischfeger F. Cadillac Motor Car Div. G. 1/2"	A. .171 B. R IV .777" .0881 .0325 .017P .68CT N11 N1 .25Mo .02P C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. 60° DV B. 3/16" .12C 2.18Ht C. Grinding D. DC-REV	A. Not Given B. 3/16" 3.75-.65Ht C. Flame cutting 1. 4. 2. 1 6/32" 28 135 25 3. 1 3/16" 28 185 25 C. 160 hours 70°-196°F D. Grinding time 40 hours.	A. None B. None	1 2584	1 11/8	IMP 1	1 11/8	P												
A. AD 711 B. 6/26/45 C. 159 D. Great Lakes Steel Corp. E. Harnischfeger F. Cadillac Motor Car Div. G. 1/2"	A. .171 B. R IV .777" .0881 .0325 .017P .68CT N11 N1 .25Mo .02P C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. 60° DV B. 3/16" .12C 2.18Ht C. Grinding D. DC-REV	A. Not Given B. 3/16" 3.75-.65Ht C. Flame cutting 1. 4. 2. 1 6/32" 28 135 25 3. 1 3/16" 28 185 25 C. 160 hours 70°-196°F D. Grinding time 40 hours.	A. None B. None	1 2584	1 11/8	IMP 1	1 11/8	P												

IDENTIFICATION	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS				REMARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.
				A. TYPE	B. TRADE NAME	C. COATING	D. DEPOSITION SIZE EL. NO. TYPE AMP. V.	E. PASSES	F. POST	
A. AD 711 B. 9/20/43 C. 164 D. Great Lakes Steel Corp. E. Fernischleger McKay Company F. Cadillac Motor Car Div.	A. 1/2" B. P. IV .777th .6961 .0228 .017P .560T N11 N1 .233Mo .039T C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. GROOVE, INCLINED ANGLE, ROOT FACE ROOT GAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. 1. BOOT TYPE 2. BODY TYPE 3. GLOW TYPE C. TOTAL WELDING TIME & INTEN. PASS TEMPERATURE	A. Not given B. 3/16"	1. A 2. 1 5/32" 1a. 86 2. 1 3/16" 2a. 110 C. 2.80 hours. 70°F-186°F D. Grinding time 2.35 hours.	2525	R	12" 54" IMP I	9"	P
A. AD 711 B. 9/20/43 C. 164 D. Great Lakes Steel Corp. E. Fernischleger McKay Company F. Cadillac Motor Car Div.	A. 1/2" B. P. IV .777th .6961 .0228 .017P .560T N11 N1 .233Mo .039T C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. Hartzsch regen A. 80° DV B. A II .12C C. Flame cutting Grinding	1. A 2. 1 5/32" 1a. 86 2. 1 3/16" 2a. 110 C. 2.80 hours. 70°F-186°F D. Grinding time 2.35 hours.	A. None B. None	2521	X	E D	IMP I 184 0 1 14	282	Crossbar had some slag. Fairly good welds.
A. AD 717 B. 9/29/43 C. 160 D. Great Lakes Steel Corp. E. McKay Company F. Cadillac Motor Car Div.	A. 1/2" B. P. IV .777th .6961 .0228 .017P .560T N11 N1 .233Mo .039T C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. 80° DV B. 3/16"	A. Not given B. Flame cutting Grinding	2525	R	12" 54" IMP I	9"	P	512	
A. AD 717 B. 9/29/43 C. 160 D. Great Lakes Steel Corp. E. McKay Company F. Cadillac Motor Car Div.	A. 1/2" B. P. IV .777th .6961 .0228 .017P .560T N11 N1 .233Mo .039T C. .28C D. Surface 341 Core 363 E. 1650°F + hr. water 860°F + hr. air	A. 80° DV B. 3/16"	A. Not given B. Flame cutting Grinding	2525	R	12" 54" IMP I	9"	P	512	Small amount of scattered slag.

IDENTIFICATION	ARMOR DATA				JOINT DESIGN				WELDING PROCEDURE				BALLISTIC RESULTS				REMARKS ON CRACKING, RADIOGRAPHIC RESULTS, ETC.			
	A. FIRING RECORD NO.	B. PLATE THICKNESS	C. TYPE	D. TRADE NAME	A. GROOVE INCLUDED ANGLE, ROOT FACE	B. DEPOSITION SIZE EL. NO. TYPE AMP V	C. ROOT GAP	D. PLATE PREPARATION	E. VEL.	F. LOCATION OF H	G. CRACKING	H. TYPE AND AMT	I. LOC.	J. LOC.	K. LOC.	L. LOC.	M. LOC.	N. LOC.		
A. AD 711 B. 6/29/43 C. 165 D. Great Lakes Steel Corp. E. McMAY Company F. Cadillac Motor Car Div.	A. 1/2" B. P-IV .77"-.98S1 .032S .017P .58Cr Ni1 Ni1 .22Mo .08Tr C. .25C D. Surface 341 Core 363 E. 1660°F 4 hr. Water 80°F 4 hr. air	A. Not given B. 3/16"-.12C 2.13Mo .03S1 .013S .025P 21.32Cr 10.8Ni .10Mo 12C 4. Post .50S1 .02CE .025P 20.25Cr 9.94Ni .0EMO B. Lime C. Lime D. DC-REV	A. A. 90° DV B. A. 77° C. Flame cutting Grinding	1. & 2. I 5/32" 2a 135 3. I 3/16" 2a 165 25 26	A. Note 1 B. None	1 2511 2 2601	1 7/16" U 2 2532 1 1/4" R	1 IMP I 2 IMP V 3 1/8" IMP I 4 1/4" IMP D	1 134 P 2 240	Little slag, good welds. * crack in crossbar.										
A. AD 711 B. 6/29/43 C. 162 D. Great Lakes Steel Corp. E. McMAY Company F. Cadillac Motor Car Div.	A. 1/2" B. P-IV .77"-.98S1 .032S .017P .58Cr Ni1 Ni1 .22Mo .08Tr C. .25C D. Surface 341 Core 363 E. 1660°F 4 hr. Water 80°F 4 hr. air	A. Not given B. 3/16"	1. & 2. I 5/32" 2a 140 3. I 3/16" 2a 180 25 25	A. Note 1 B. None	1 2539 2 2632	1 1/4" U 2 2532 1 1/4" R	1 IMP I 2 IMP D 3 1/4" IMP D 4 1/4" IMP D 5 1/8" IMP D 6 1/4" IMP D	1 164 P 2 124 3 294	Good welds in all areas. Small slag inclusions.											
A. AD 711 B. 6/29/43 C. 162 D. Great Lakes Steel Corp. E. McMAY Company F. Cadillac Motor Car Div.	A. 1/2" B. P-IV .77"-.98S1 .032S .017P .58Cr Ni1 Ni1 .22Mo .08Tr C. .25C D. Surface 341 Core 363 E. 1660°F 4 hr. Water 80°F 4 hr. air	A. 90° DV B. 3/16"	1. & 2. I 5/32" 2a 140 3. I 3/16" 2a 180 25 25	A. Note 1 B. None	1 2539 2 2632	1 1/4" U 2 2532 1 1/4" R	1 IMP I 2 IMP D 3 1/4" IMP D 4 1/4" IMP D 5 1/8" IMP D 6 1/4" IMP D	1 164 P 2 124 3 294												

IDENTIFICATION	ELECTRODE DATA		JAW DESIGN		WELDING PROCEDURE		TEST		BALLISTIC RESULTS		REPORTS ON CRACKING	
	A. PLATE THICKNESS	B. TYPE	C. COATING	D. CURRENT	E. POLARITY	F. DEPOSITION SIZE EL.	G. NO. TYPE AMP.	H. VEL.	I. LOCATION OF S.	J. CRACKING	K. TYPE	L. AMT
A. FINISH RECORD NO. B. B/19/63 C. 170 D. Great Lakes Steel Corp. E. Parimische Ger. McKay F. Cadillac Motor Car Division	A. 1/2" B. R-IV .80"-.785" .019F .20M C. Opt; .26C D. Face 375 E. 1650F 40 min. 940F 70 min.	A. groove, inclined B. angle, root face C. root cap	A. BACKING B. PLATE PREPARATION C. PLATE PREPARATION	A. 1.82" 11 5/32" Pa 3. 11 3/16" 2b 185 25 5/32" 4b 135 25	PASSES 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST	A. None B. None	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	Unacceptable due to cracking and imperfect fusion.	
A. AD 780 B. B/19/43 C. 174 D. Great Lakes Steel Corp. E. Parimische Ger. McKay F. Cadillac Motor Car Division	A. 1/2" B. R-IV .84"-.855" .021P .24M C. Opt; .27C D. Face 363 E. 1650F 30 min water 900F 90 min air	A. groove, inclined B. angle, root face C. root cap	A. BACKING B. PLATE PREPARATION C. PLATE PREPARATION	A. 1.82" 11 5/32" Pa 3. 11 3/16" 2b 185 25 5/32" 4b 135 25	PASSES 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST	A. None B. None	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	Some slag.	
A. AD 780 B. B/19/43 C. 174 D. Great Lakes Steel Corp. E. Parimische Ger. McKay F. Cadillac Motor Car Division	A. 1/2" B. R-IV .84"-.855" .021P .24M C. Opt; .27C D. Face 363 E. 1650F 30 min water 900F 90 min air	A. groove, inclined B. angle, root face C. root cap	A. BACKING B. PLATE PREPARATION C. PLATE PREPARATION	A. 1.82" 11 5/32" Pa 3. 11 3/16" 2b 185 25 5/32" 4b 135 25	PASSES 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST	A. None B. None	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	Some slag.	
A. AD 780 B. B/19/43 C. 174 D. Great Lakes Steel Corp. E. Parimische Ger. McKay F. Cadillac Motor Car Division	A. 1/2" B. R-IV .84"-.855" .021P .24M C. Opt; .27C D. Face 363 E. 1650F 30 min water 900F 90 min air	A. groove, inclined B. angle, root face C. root cap	A. BACKING B. PLATE PREPARATION C. PLATE PREPARATION	A. 1.82" 11 5/32" Pa 3. 11 3/16" 2b 185 25 5/32" 4b 135 25	PASSES 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST	A. None B. None	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	A. 2533 4" R B. 5/32" U C. 5/32" L D. 5/32" L	Some slag.	

IDENTIFICATION	EFFECTIVE DATA			JOINT DESIGN		WELDING		PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING	
	A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	A. TYPE	B. INCLUDED ANGLE.	C. COATING	D. CURRENT & POLARITY	E. DEPOSITION SIZE EL. NO. TYPE AMP. V.	F. DEPOSITION SIZE EL. NO. TYPE AMP. V.	G. LOCATION OF R	H. VEL.	I. DISTANCE	J. CRACKING
A. AF 783 B. 8/18/43 C. 1/2" Great Lakes Steel Corp. E. Hartischreifer Motor Car Division F. Cadillac Motor Car Division	A. 1/2" B. R. TV C. .84 Mn .85 Si D. .30 Cr .2611 .42 Cr .24 Mn .07 Cr .27% E. Back 283 F. 1625°F 30 min.	A. A. VII B. .100" .1/4" C. .133" .035 D. .0135 .025 .21.7237 E. Back 283 F. 1625°F 30 min.	A. Not given B. Flame cutting C. Grinding D. Grinding time 1.59 hours.	A. PNE B. POST	A. R.L. B. L.L. C. C.B.	A. IMP B. U	A. 1.2521 B. None B. None	A. 2520 B. 135 C. 25 D. 25	A. 5" R B. 5" U C. 7" L D. 7" D	A. 1.2521 B. 2520 C. 2598 D. 2599	A. - B. - C. - D. -	P	
A. AF 783 B. 8/18/43 C. 1/2" Great Lakes Steel Corp. E. Hartischreifer Motor Car Division F. Cadillac Motor Car Division	A. 1/2" B. R. TV C. .84 Mn .85 Si D. .30 Cr .2611 .42 Cr .24 Mn .07 Cr .27% E. Back 283 F. 1625°F 30 min.	A. A. VII B. .100" .1/4" C. .133" .035 D. .0135 .025 .21.7237 E. Back 283 F. 1625°F 30 min.	A. Not given B. Flame cutting C. Grinding D. Grinding time 1.59 hours.	A. PNE B. POST	A. R.L. B. L.L. C. C.B.	A. IMP B. U	A. 1.2521 B. None B. None	A. 2520 B. 135 C. 25 D. 25	A. 5" R B. 5" U C. 7" L D. 7" D	A. 1.2521 B. 2520 C. 2598 D. 2599	A. - B. - C. - D. -	P	
A. AF 783 B. 8/18/43 C. 1/2" Great Lakes Steel Corp. E. Hartischreifer Motor Car Division F. Cadillac Motor Car Division	A. 1/2" B. R. TV C. .84 Mn .85 Si D. .30 Cr .2611 .42 Cr .24 Mn .07 Cr .27% E. Back 283 F. 1625°F 30 min.	A. A. VII B. .100" .1/4" C. .133" .035 D. .0135 .025 .21.7237 E. Back 283 F. 1625°F 30 min.	A. Not given B. Flame cutting C. Grinding D. Grinding time 1.59 hours.	A. PNE B. POST	A. R.L. B. L.L. C. C.B.	A. IMP B. U	A. 1.2521 B. None B. None	A. 2520 B. 135 C. 25 D. 25	A. 5" R B. 5" U C. 7" L D. 7" D	A. 1.2521 B. 2520 C. 2598 D. 2599	A. - B. - C. - D. -	P	
A. AF 783 B. 8/18/43 C. 1/2" Great Lakes Steel Corp. E. Hartischreifer Motor Car Division F. Cadillac Motor Car Division	A. 1/2" B. R. TV C. .84 Mn .85 Si D. .30 Cr .2611 .42 Cr .24 Mn .07 Cr .27% E. Back 283 F. 1625°F 30 min.	A. A. VII B. .100" .1/4" C. .133" .035 D. .0135 .025 .21.7237 E. Back 283 F. 1625°F 30 min.	A. Not given B. Flame cutting C. Grinding D. Grinding time 1.59 hours.	A. PNE B. POST	A. R.L. B. L.L. C. C.B.	A. IMP B. U	A. 1.2521 B. None B. None	A. 2520 B. 135 C. 25 D. 25	A. 5" R B. 5" U C. 7" L D. 7" D	A. 1.2521 B. 2520 C. 2598 D. 2599	A. - B. - C. - D. -	P	

IDENTIFICATION	ABSORB DATA		ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		TEST		BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS ETC	
	A. PLATE THICKNESS	B. TYPE	C. TRADE NAME	D. COATING	E. ANOD. CONCNT	F. BHN	G. PROCESSES	H. ROOT FACE	I. BACKING	J. DEPOSITION SIZE	K. NO. OF PASS	L. POST	M. VEL.	N. LOC.	O. CRACKING	P. TYPE	Q. AMT	
A. FIRING RECORD NO. B. DATE OF TEST C. PLATE NO. D. ALUMINUM MANUFACTURER E. ELECTRODE MFRN. F. ALUMINUM FABRICATOR	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 1	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 2	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173 D. Great Lakes Steel Corp. E. Reid-Avery. McKay Company F. Cadillac Motor Car Division G. 10.2GN1 H. Back 415 I. .76Mo J. 1000°F 30 min. K. 840°F 70 min.	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 3	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173 D. Great Lakes Steel Corp. E. Reid-Avery. McKay Company F. Cadillac Motor Car Division G. 10.2GN1 H. Back 415 I. .76Mo J. 1000°F 30 min. K. 840°F 70 min.	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 4	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173 D. Great Lakes Steel Corp. E. Reid-Avery. McKay Company F. Cadillac Motor Car Division G. 10.2GN1 H. Back 415 I. .76Mo J. 1000°F 30 min. K. 840°F 70 min.	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 5	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173 D. Great Lakes Steel Corp. E. Reid-Avery. McKay Company F. Cadillac Motor Car Division G. 10.2GN1 H. Back 415 I. .76Mo J. 1000°F 30 min. K. 840°F 70 min.	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 6	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173 D. Great Lakes Steel Corp. E. Reid-Avery. McKay Company F. Cadillac Motor Car Division G. 10.2GN1 H. Back 415 I. .76Mo J. 1000°F 30 min. K. 840°F 70 min.	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 7	L. IMP	M. 1	N. 1 1/8"	O. P			
A. AD 856 B. 8/27/43 C. 173 D. Great Lakes Steel Corp. E. Reid-Avery. McKay Company F. Cadillac Motor Car Division G. 10.2GN1 H. Back 415 I. .76Mo J. 1000°F 30 min. K. 840°F 70 min.	A. .125"	B. R.T.V.	C. A.I.	D. .0035" .02P	E. .0700" .21Mo	F. .0777" .21Mo	G. .2451	H. .0106	I. .025P	J. .147.10 minutes	K. 8	L. IMP	M. 1	N. 1 1/8"	O. P			

IDENTIFICATION	ABOP DATA	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS ETC.			
		A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. BHN	E. PROCESS	F. REAR TREATMENT	G. CURRENT & POLARITY	H. GROOVE INCLUDED ANGLE, ROOT FACE	I. TRADE NAME	J. COATING	K. DEPOSITION SIZE EL. NO. TYPE AMP. V.	L. LOCATION C/P H	M. LOC. F/S	N. VEL. L.L. R.L. C.B.	O. PRE POST	P. CRACKING	TYPE AND	SIZE
A. FABRIC RECORD NO. B. DATE OF TEST C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRODE MFG. F. ARMOR FABRICATOR	A. 461 B. 8/8/43 C. #2 D. Jones & Laughlin Youngstown Sheet & Tube Company E. Crucible Steel Company F. Chicago Vitreous Enamel Products Company	A. 1/2" B. R. III J & L 1.69Mn .08C .001Mn .081 .018P .25Mo .27C Face 340 D. Back 361 E. B.O.H. F. 1650F 1 hr. water 775F 3 hrs. air	A. A. I 2.01Mn .306I .19.43Cr 10.16Ni 1.94Mo C. Face 340 D. Back 361 E. B.O.H. F. 1650F 1 hr. water 775F 3 hrs. air	A. .09C 2.01Mn .306I .0178 .018P .25Mo .27C Face 340 D. Back 361 E. B.O.H. F. 1650F 1 hr. water 775F 3 hrs. air	A. 45° SV B. 1/4" C. Flame cutting Grinding	A. Copper B. 5/32" C. 3/16" 3. III 3/16" Seal bead 5/32" C. 1a. 150 C. 3 hours. 130 F to 400 F D. Grinding time 49 minutes.	A. 1/2" 150 2a. 200 2b. 200 30 3. 150 C. 150 D. 400 F	A. None B. None	A. 26.00 X 0.4" U	B. 25.26 5/8" R	C. 25.31 7/8" R	D. 25.98 1 1/8" R	E. 26.00 4" U	F. 25.26 5/8" D	G. 25.31 7/8" R	H. 25.98 1 1/8" D	I. 1 1/4" IMP 1 1/4" IMP 1 1/4" IMP 1 1/4" IMP	J. - K. - L. - M. -	N. P

IDENTIFICATION	WELDING DATA		JOINT DESIGN		WELDING PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING		
	A. PLATE THICKNESS	B. TYPE	C. ANGLE NO.	D. ROOT GAP	E. COATING	F. TRADE NAME	G. C. CURRENT	H. VEL.	I. LOCATION OF H	J. CRACKING	K. RADIOGRAPHIC RESULTS, ETC.
A. AD 791 B. 8/17/43 C. 109 D. Jones & Laughlin E. McRay Company F. Fisher Tank Division	A. 1/2"	B. F 711 1.66in. .2851 .3910 .28C Face 311 Back 321 1600°F 2 hr. water 68°F 1/2 hr. air	A. A 71 4.03in .0251 .0038 .043P .19.SCR 9.71IN1 .1CMC B. A 5 C. Lime DC-5EV	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS	A. PRE B. POST F/S L. L. R. L. C. D. LOC. TYPE ANT					
A. AD 791 B. 8/17/43 C. 110 D. Great Lakes Steel E. McRay Company F. Fisher Tank Division	A. 1/2"	B. F 71V 1.46in .25C1 .0615 .025P .38CT .15M .23C Face 321 Back 321 1650°F 30 min water 88°F 1/2 hr. air	A. 45° SV 3/8"	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. COPPER B. FLAME CUTTING C. GRINDING 1. II 3/16" 2b 175 21 II 3/16" 4b 175 21 II 5/32" 3b 180 21 3 Seal beads 3/16" 3b 175 21 C. 1 hour 26 minutes. 120°F - 290°F D. Grinding time 1 hr.	A. None B. None 1 2 2519 1/2" L 8 1/2" D					
A. AD 791 B. 8/17/43 C. 110 D. Great Lakes Steel E. McRay Company F. Fisher Tank Division	A. 1/2"	B. F 71V 1.46in .25C1 .0615 .025P .38CT .15M .23C Face 321 Back 321 1650°F 30 min water 88°F 1/2 hr. air	A. 45° SV 3/8"	A. COPPER B. FLAME CUTTING C. GRINDING 1. I 3/16" 1a 175 21 I 1/4" 2a 250 21 I 1/4" 1a 250 21 One seal bead- 1/4" 1a 250 21 C. 1 hour 120°F-170°F D. Grinding time 40 minutes.	A. None B. None 1 2 2519 1/2" L 8 1/2" D 31 1/2"						

IDENTIFICATION	ELECTRODE DATA				JOINT POSITION		WELDING PROCEDURE		BALLISTIC RESULTS				REMARKS ON CRACKING						
	A. PLATE THICKNESS	B. TYPE	C. TRADE NAME	D. CARBON CONTENT	E. COATING	F. CURRENT	G. POLARITY	H. BACKING	I. ANGLE, ROOT FACE	J. ROOT CAP	K. DEPOSITION SIZE EL.	L. NO. OF PASSES	M. TYPE AMP. V	N. LOC.	O. TYPE AND	P. RADIOGRAPHIC RESULTS, ETC.			
A. A 10829 B. 1119/43 C. L 2 D. Jones & Laughlin E. Harnischreger F. Fisher Body G. Lansing Division H. Water I. 825°F 1½ hr. J. air	A. 1/2"	A. A 7	A. 60° SV	B. 1/4"	B. P. & H. Smootharc	C. AC	D. AC	E. Flame cutting	F. 5/32"	G. 1a	H. 145	I. 80	J. 2000°F	K. 1	L. R	M. U	N. IMP	O. 1 7½"	P.
A. A 10943 B. 1119/43 C. L 3 D. Jones & Laughlin E. Harnischreger F. Fisher Body G. Lansing Division H. Water I. 825°F 1½ hr. J. air	A. 1/2"	A. A 1	A. 60° SV	B. 1/4"	B. P. & H. Smootharc	C. Lime	D. AC	E. Flame cutting	F. 5/32"	G. 1a	H. 145	I. 80	J. 105	K. 1	L. R	M. U	N. IMP	O. 1 21½"	P.
A. A 1083 B. 1119/43 C. L 1 D. — E. — F. Fisher Body G. Lansing Division	A. 1/2"	A. —	A. 45° SV	B. —	B. 1/4"	C. —	D. AC	E. Flame cutting	F. 5/32"	G. 1a	H. 160	I. 80	J. 2000°F	K. 2	L. R	M. U	N. IMP	O. 1 29½"	P.
A. A 1083 B. 1119/43 C. L 1 D. — E. — F. Fisher Body G. Lansing Division	A. 1/2"	A. —	A. 45° SV	B. —	B. 1/4"	C. —	D. AC	E. Flame cutting	F. 5/32"	G. 1a	H. 160	I. 80	J. 2000°F	K. 3	L. R	M. U	N. IMP	O. 1 21½"	P.
A. A 1083 B. 1119/43 C. L 1 D. — E. — F. Fisher Body G. Lansing Division	A. 1/2"	A. —	A. 45° SV	B. —	B. 1/4"	C. —	D. AC	E. Flame cutting	F. 5/32"	G. 1a	H. 160	I. 80	J. 2000°F	K. 4	L. R	M. U	N. IMP	O. 1 21½"	P.

TESTIFICATION	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		HEAT		BALLISTIC RESULTS				REMARKS ON CRACKING RADIOGRAPHIC RESULTS, ETC.		
	A. PLATE THICKNESS	B. TYPE	C. TRADE NAME	D. COATING	E. CURRENT	F. POLARITY	G. PLATE PREPARATION	H. DEPOSITION SIZE E.L.	I. NO. TYPE AMP. V.	J. PRE	K. POST	L. P/S	M. L.L.	N. R.L.	O. C.B.	P. LOC.	Q. TYPE
A. A 12880 B. 3/17/44 C. FGB 17 D. Jones A. E. Laughlin F. Hartmischreger G. FitzRibbons H. Boiler Co.	A. 1/2"	B. E. 1111 1.50M .200C 1 .018S .31M .24C Face 363 Back 343 B. O.H. P. 45° SV 3/16"	A. 1/2"	B. 4.0-4.34" 3/16"	C. Flame cutting	D. Seal bead - 3/16"	E. 18.0- 19.0- 19.0C 8.2-8.5M 170- 80M0	F. 1. 3/16" 2. 1 1/4" 3. 1 1/4"	G. 1a 175 2a 250 2a 22	H. A. None B. None	I. 1 2544 1 2544	J. 14" U 14" R	K. 51" IMP 51" IMP	L. 1 86" V 1 86" V	M. P Small amount of slag.	N.	O.
A. A 12112 B. 3/28/44 C. FGB 19 D. Carnegie 111. E. Hartmischreger F. FitzRibbons G. Boiler Co.	A. 1/2"	B. E. 1111 1.22M .200C 1 .018S .31M .28C Face 364 Back 364 B. O.H. P. 45° SV 3/16"	A. 1/2"	B. 4.0-4.34" 3/16"	C. Flame cutting	D. Seal bead - 3/16"	E. 18.0- 18.0C 8.2-8.5M 170- 80M0	F. 1. 3/16" 2. 1 1/4" 3. 1 1/4"	G. 1a 200 2a 260 2a 21	H. A. None B. None	I. 1 2542 1 2542	J. 14" U 14" R	K. 62" IMP 62" IMP	L. 1 20" V 1 20" V	M. P 14" of weld repair visible in radio- graphs. Welds are acceptable.	N.	O.
A. A 13112 B. 3/28/44 C. FGB 20 D. Great Lakes E. Lincoln F. FitzRibbons G. Boiler Co.	A. 1/2"	B. E. 1111 0.88M .200C 1 .31M .24C .24C Face 252 Back 343 B. O.H. P. 45° SV 3/16"	A. 1/2"	B. 3/16"	C. Flame cutting	D. Seal bead - 3/16"	E. 18.0- 18.0C 15-10.0I 15-10.0I 15-10.0I 15-10.0I 15-10.0I	F. 1. 3/16" 2. 1 1/4" 3. 1 1/4"	G. 1a 200 2a 300 2a 25	H. A. None B. None	I. 1 2524 1 2524	J. 71" U 1 71" L	K. 71" IMP 71" IMP	L. 1 15" V 1 15" V	M. P 9" of weld repair visible in radio- graph. Welds are acceptable.	N.	O.
A. A 13112 B. 3/28/44 C. FGB 20 D. Great Lakes E. Lincoln F. FitzRibbons G. Boiler Co.	A. 1/2"	B. E. 1111 0.88M .200C 1 .31M .24C .24C Face 252 Back 343 B. O.H. P. 45° SV 3/16"	A. 45° SV	B. 3/16"	C. Flame cutting	D. Seal bead - 3/16"	E. 18.0- 18.0C 15-10.0I 15-10.0I 15-10.0I 15-10.0I 15-10.0I	F. 1. 3/16" 2. 1 1/4" 3. 1 1/4"	G. 1a 200 2a 300 2a 25	H. A. None B. None	I. 1 2524 1 2524	J. 71" U 1 71" L	K. 71" IMP 71" IMP	L. 1 14" V 1 14" V	M. P 9" of weld repair visible in radio- graph. Welds are acceptable.	N.	O.
A. A 13112 B. 3/28/44 C. FGB 20 D. Great Lakes E. Lincoln F. FitzRibbons G. Boiler Co.	A. 1/2"	B. E. 1111 0.88M .200C 1 .31M .24C .24C Face 252 Back 343 B. O.H. P. 45° SV 3/16"	A. 45° SV	B. 3/16"	C. Flame cutting	D. Seal bead - 3/16"	E. 18.0- 18.0C 15-10.0I 15-10.0I 15-10.0I 15-10.0I 15-10.0I	F. 1. 3/16" 2. 1 1/4" 3. 1 1/4"	G. 1a 200 2a 300 2a 25	H. A. None B. None	I. 1 2524 1 2524	J. 71" U 1 71" L	K. 71" IMP 71" IMP	L. 1 17" V 1 17" V	M. P Bottom of pass #1 ground clear.	N.	O.

JOINT DESIGN		ELECTRODE DATA		WELD NO.		PROCEDURE		HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING	
		A. TYPE	B. TRADE NAME	C. COATING	D. CURRENT & POLARITY	E. GROOVE, INCLUDED ANGLE, ROOT FACE	F. DEPOSITION SIZE EL. NO. TT'E IMP. V.	G. PASSES	H. VEL. F/S	I. LOCATION OF B. L.L. N.L. C.B.	J. LOCATION OF A. L.L. N.L. C.B.	K. TYPE & ANT.	L. RADIOGRAPHIC RESULTS, ETC.
A. FIRING SECTEUR NO.	I. PLATE THICKNESS	A. .08-.12C	B. 22S1	C. .015P	D. 15Mo	E. .15-.8061	F. .005-.03F	G. 1. 3/16" P. 2. 1/4" P. 3. 1/4" P.	H. 5. 2532	I. 102	J. U	K. IMP	L. 154 F
B. DATE OF TEST	J. PLATE NO.	P. H.V.	R. 1.4mm	S. .025S	T. Lincoln	U. .122	V. Face 341	W. Back 343	X. 1/4"	Y. 18	Z. D	IMP	1. 21
C. PLATE NO.	K. CARBON CONTENT	P. FGB 21	R. .0281	S. .025S	T. Fitter Buttons	U. .122	V. Face 341	W. Back 343	X. 1/4"	Y. 18	Z. D	IMP	2. 364
D. ARMOR MANUFACTURER	L. ELECTRODE MFG.	M. Your Town	N. .025S	O. .025S	P. Eddle Co.	Q. .190-	R. 2C.5CR	S. B.S.	T. 1/4"	U. 300	V. 72	IMP	3. 74" of weld repair visible in radiographs. Welds are acceptable.
E. ELECTRODE MFG.	F. LABOR FABRICATOR	G. Lincoln	H. .15Mo	I. .15Mo	J. Eddle Co.	K. .190-	L. Seal bead-	M. Bottom of pass #1	N. Reinforcement	O. Smooth	P. 154	IMP	4. 154 F
F. LABOR FABRICATOR	G. HEAT TREATMENT TEMP TIME QUENCH	H. .025S	I. .025S	J. .025S	K. .025S	L. .025S	M. Reinforcement	N. Reinforcement	O. Reinforcement	P. Reinforcement	Q. Reinforcement	IMP	5. 154 F
A. A. 13115	A. A. 1/2"	A. A. 1/4"	A. A. 45° SV	A. A. Copper	A. A. None	A. A. None	A. A. None	A. A. None	A. A. None	A. A. None	A. A. None	A. A. None	A. A. None
B. 3/8/84	C. PLATE NO.	D. 1.4mm	E. .0281	F. .025S	G. .025S	H. .025S	I. .025S	J. .025S	K. .025S	L. .025S	M. .025S	N. .025S	O. .025S
C. FGB 21	D. PLATE NO.	E. Your Town	F. .025S	G. .025S	H. .025S	I. .025S	J. .025S	K. .025S	L. .025S	M. .025S	N. .025S	O. .025S	P. .025S
D. YOUR TOWN	E. LINCOLN	F. LINCOLN	G. .025S	H. .025S	I. .025S	J. .025S	K. .025S	L. .025S	M. .025S	N. .025S	O. .025S	P. .025S	Q. .025S
E. LINCOLN	F. FITTER BUTTONS	G. EDDLE CO.	H. .025S	I. .025S	J. .025S	K. .025S	L. .025S	M. .025S	N. .025S	O. .025S	P. .025S	Q. .025S	R. .025S
F. EDDLE CO.	G. HEAT TREATMENT TEMP TIME QUENCH	H. .025S	I. .025S	J. .025S	K. .025S	L. .025S	M. .025S	N. .025S	O. .025S	P. .025S	Q. .025S	R. .025S	S. .025S

TEST IDENTIFICATION	APRIL DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			NOTES ON CRACKING					
							A. TYPE	B. TAPE SIZE	C. COATING	D. CURRENT A	E. POLARITY	F. BEAT TREATMENT	G. TIME QUENCH	H. DEGREES INCLINED	I. ANGLE, ROOT FACE
A. AD 729 B. 7/6, 9/43	A. 1/2" R II B. R II C. W 22-2 D. Ford Motor Co. E. Crucible Steel Company F. Ford Motor Co.	A. .091C .021P .005R .008 .020 .015S .038P .008N C. .28C D. Face 341 Back 341 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 3 hrs. W3 CER	A. GROOVE, INCLINED ANGLE, ROOT FACE B. TAPE C. COATING D. CURRENT A E. POLARITY	A. BACKING B. OXYGEN SIZE EL. NO. TYPE AMP. V. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. Not Given B. 3/16" Shear C. Seal bead- 3/16" 20.09Cr 9.9Ni 1.5Mo Residual C. Titanium DC-REV D. Face 341 Back 341 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 3 hrs. W3 CER	A. None B. None	A. 90° SV B. 3/16" Shear C. Seal bead- 3/16" 20.09Cr 9.9Ni 1.5Mo Residual C. Titanium DC-REV D. Face 341 Back 341 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 3 hrs. W3 CER	A. 2517 B. 2530 C. 1113 D. 1057	A. 4 1/2" U B. 2 1/2" L C. 7 1/2" U D. 5 1/2" D	A. IMP I 1 1/2" F B. IMP V 5 1/2" 2" Weld is not acceptable due to excessive amount of incomplete fusion.	A. None B. None	A. 2546 B. None	A. 2 1/2" D B. 2 1/2" R C. 3 1/2" D D. 3 1/2" D	A. IMP I 1 1/2" P B. IMP V 5 1/2"	
A. AD 745 B. 7/15/43	A. 1/2" R II B. 1/4" 27S! C. W 172 D. Ford Motor Co. E. Arcel Corp. F. Ford Motor Co.	A. .091C .021P .005R .014Ni .005 .020 C. .28C D. Face 331 Back 331 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 24 hrs. W3	A. A 1 B. 3/16" 27S! C. .021P .005R .014Ni .005 .020 C. .28C D. Face 331 Back 331 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 24 hrs. W3	A. Flame cutting B. Grinding C. Chromang D. Titanium E. DC-REV F. Face 331 Back 331 G. 1650°F 24 hrs. H. 965°F 24 hrs. I. W3	A. None B. 5/32" 1A C. 3/16" 1A D. 1/4" 1A E. Seal bead- 3/16" 24 hours. F. 1650°F 24 hrs. G. 965°F 24 hrs. H. W3	A. 1 1/2" 1A B. 1 1/2" 1A C. 1 1/2" 1A D. 1 1/2" 1A E. 1 1/2" 1A F. 1 1/2" 1A G. 1 1/2" 1A H. 1 1/2" 1A	A. 2543 B. 2530 C. 2530 D. 2530	A. 2 1/2" D B. 2 1/2" R C. 3 1/2" D D. 3 1/2" D	A. IMP I 1 1/2" P B. IMP V 5 1/2"						
A. AD 745 B. 7/15/43	A. 1/2" R II B. 1/4" 27S! C. W 172 D. Ford Motor Co. E. Arcel Corp. F. Ford Motor Co.	A. .091C .021P .005R .014Ni .005 .020 C. .28C D. Face 331 Back 331 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 24 hrs. W3	A. A 1 B. 3/16" 27S! C. .021P .005R .014Ni .005 .020 C. .28C D. Face 331 Back 331 E. B.O.F. F. 1650°F 24 hrs. sparks 965°F 24 hrs. W3	A. Flame cutting B. Grinding C. Chromang D. Titanium E. DC-REV F. Face 331 Back 331 G. 1650°F 24 hrs. H. 965°F 24 hrs. I. W3	A. None B. 5/32" 1A C. 3/16" 1A D. 1/4" 1A E. Seal bead- 3/16" 24 hours. F. 1650°F 24 hrs. G. 965°F 24 hrs. H. W3	A. 1 1/2" 1A B. 1 1/2" 1A C. 1 1/2" 1A D. 1 1/2" 1A E. 1 1/2" 1A F. 1 1/2" 1A G. 1 1/2" 1A H. 1 1/2" 1A	A. 2521 B. None	A. IMP I 1 1/2" P B. IMP V 5 1/2"							

TESTIFICATION	ARCING DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS		NOTES ON CRACKING RADIOGRAPHIC RESULTS, ETC.	
				A. VACUUM	B. PRE-HEAT	C. LOCATION OF R	D. CRACKING
A. FISHER RECORD NO. B. DATE OF TEST C. PLATE NO. D. ARROW MANUFACTURERS E. ELECTRODE MFG. F. ARROW FABRICATORS	1. PLATE THICKNESS 2. TYPE 3. CARBON CONTENT 4. IRON 5. PROCESS 6. BEAT TREATMENT 7. TIME QUENCH 8. TEMP.	A. GROOVE, INCLUDED ANGLE, ROOT; FACE B. COATING C. PLATE PREPARATION D. CURRENT E. POLARITY	A. BACKING B. DEPOSIT SIZE EL. C. NO. TYPE AMP D. V.	A. PRE- B. POST C. PASS D. TYPE E. LOC.	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.
A. A 11585 B. 1/4/44 C. 12AC D. Ford Motor Co. E. Metal & Thermite F. Corp. G. Ford Motor Co.	A. 1/2" B. R 11 C. 1.18"n .2281 D. .0185 .021P E. .610 .10N1 F. .350 G. .009P H. .0013B I. .2PC J. Face 321 K. Back 321 L. 0.05 M. 150 F 2 hrs N. 3050 F 2 hrs O. 24 hrs	A. A 1 B. .090 C. 3.380n D. .2551 E. .0115 F. .009P G. 1A-55-CF H. 9-1431 I. .6420 J. Murix K. Lime L. TC-15F M. 3050 F 24 hrs	A. 45° SV B. 5/32"	A. GROOVE, INCLUDED ANGLE, ROOT; FACE B. COATING C. PLATE PREPARATION D. CURRENT E. POLARITY	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.
A. A 11585 B. 1/15/44 C. W 300 D. Ford Motor Co. E. Park Steel & Wire Co. F. Ford Motor Co.	A. 1/2" B. R 11 C. 1.18-1.25" D. .22-281 E. .018- .020 F. .021- .022P G. .510 H. .001C I. .0012B J. .2PC K. Face 321-341 L. Back 321-341 M. 0.05 N. 24 hrs	A. GROOVE, INCLUDED ANGLE, ROOT; FACE B. COATING C. PLATE PREPARATION D. CURRENT E. POLARITY F. Face 321-341 G. Back 321-341 H. 0.05 I. 24 hrs	A. 45° SV B. 5/32"	A. GROOVE, INCLUDED ANGLE, ROOT; FACE B. COATING C. PLATE PREPARATION D. CURRENT E. POLARITY F. Face 321-341 G. Back 321-341 H. 0.05 I. 24 hrs	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.
A. A 11585 B. 1/15/44 C. W 300 D. Ford Motor Co. E. Park Steel & Wire Co. F. Ford Motor Co.	A. 1/2" B. R 11 C. 1.18-1.25" D. .22-281 E. .018- .020 F. .021- .022P G. .510 H. .001C I. .0012B J. .2PC K. Face 321-341 L. Back 321-341 M. 0.05 N. 24 hrs	A. GROOVE, INCLUDED ANGLE, ROOT; FACE B. COATING C. PLATE PREPARATION D. CURRENT E. POLARITY F. Face 321-341 G. Back 321-341 H. 0.05 I. 24 hrs	A. 45° SV B. 5/32"	A. GROOVE, INCLUDED ANGLE, ROOT; FACE B. COATING C. PLATE PREPARATION D. CURRENT E. POLARITY F. Face 321-341 G. Back 321-341 H. 0.05 I. 24 hrs	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.	A. PRE- B. POST C. LOC.

TEST IDENTIFICATION	ARMOR DATA		SHIELD DESIGN		PROJECTILE		PROCEDURE		BLAST		BALLISTIC RESULTS					
	A. PLATE NUMBER	B. TYPE	C. PLATE THICKNESS	D. TYPE	E. TRADE NAME	F. COATING	G. CARBON CONTENT	H. CURRENT	I. POLARITY	J. PLATE PREPARATION	K. DEPOSITION SIZE EL.	L. NO. TYPE APP. V	M. LOCATION OF S.	N. VEL.	O. LOC.	P. CRACKING
A. A 12606 B. 2/26/44 C. N 314	A. 1/2" B. R. II C. 1.250"	A. A 1 B. .11C C. 1.62" hr	A. ACETIC B. ACID C. COATING	A. ANGLE B. BOOT CAP	A. DEPOSITION SIZE EL. B. BOOT TYPE C. PLATE PREPARATION	A. 45° SV B. 5/32" C. Flame cutting	A. .0196 .0019 .510R .0013R .257C D. Face 321-341 E. Back 321-341 F. B.O.H. G. 1650F 2 hrs. H. spray 960F 2 hrs. I. air	A. REINFORCED B. TRADE NAME C. COATING D. CURRENT E. POLARITY F. SHIELD TREATMENT G. TIME SPACER	A. 1. BODY TYPE B. 2. BODY TYPE C. GEAR TYPE D. TOTAL BENDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 2514 B. None	A. 14° L	A. 7 1/4 U	A. - - - P		
A. A 12606 B. 2/26/44 C. N 314	A. 1/2" B. R. II C. 1.250"	A. A 1 B. .11C C. 1.62" hr	A. ACETIC B. ACID C. COATING	A. ANGLE B. BOOT CAP	A. DEPOSITION SIZE EL. B. BOOT TYPE C. PLATE PREPARATION	A. 45° SV B. 5/32" C. Flame cutting	A. .0196 .0019 .510R .0013R .257C D. Face 321-341 E. Back 321-341 F. B.O.H. G. 1650F 2 hrs. H. spray 960F 2 hrs. I. air	A. REINFORCED B. TRADE NAME C. COATING D. CURRENT E. POLARITY F. SHIELD TREATMENT G. TIME SPACER	A. 1. BODY TYPE B. 2. BODY TYPE C. GEAR TYPE D. TOTAL BENDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 2514 B. None	A. 14° L	A. 7 1/4 U	A. - - - P		
A. A 12606 B. 3/9/44 C. 75	A. 1/2" B. R. II C. 1.22"	A. A 1 B. .075C C. .8741	A. ACETIC B. ACID C. COATING	A. ANGLE B. BOOT CAP	A. DEPOSITION SIZE EL. B. BOOT TYPE C. PLATE PREPARATION	A. 45° SV B. 3/16" C. Flame cutting	A. .0196 .0019 .510R .0013R .257C D. Face 321-341 E. Back 321-341 F. B.O.H. G. 1650F 2 hrs. H. spray 960F 2 hrs. I. air	A. REINFORCED B. TRADE NAME C. COATING D. CURRENT E. POLARITY F. SHIELD TREATMENT G. TIME SPACER	A. 1. BODY TYPE B. 2. BODY TYPE C. GEAR TYPE D. TOTAL BENDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 2514 B. None	A. 14° L	A. 7 1/4 U	A. - - - P		
A. A 12606 B. 3/9/44 C. 75	A. 1/2" B. R. II C. 1.22"	A. A 1 B. .075C C. .8741	A. ACETIC B. ACID C. COATING	A. ANGLE B. BOOT CAP	A. DEPOSITION SIZE EL. B. BOOT TYPE C. PLATE PREPARATION	A. 45° SV B. 3/16" C. Flame cutting	A. .0196 .0019 .510R .0013R .257C D. Face 321-341 E. Back 321-341 F. B.O.H. G. 1650F 2 hrs. H. spray 960F 2 hrs. I. air	A. REINFORCED B. TRADE NAME C. COATING D. CURRENT E. POLARITY F. SHIELD TREATMENT G. TIME SPACER	A. 1. BODY TYPE B. 2. BODY TYPE C. GEAR TYPE D. TOTAL BENDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 2514 B. None	A. 14° L	A. 7 1/4 U	A. - - - P		
A. A 12606 B. 3/13/44 C. 222	A. 1/2" B. R. II C. 1.25-1.28"	A. A 1 B. .11C C. 1.91" hr	A. ACETIC B. ACID C. COATING	A. ANGLE B. BOOT CAP	A. DEPOSITION SIZE EL. B. BOOT TYPE C. PLATE PREPARATION	A. 45° SV B. 3/16" C. Flame cutting	A. .0196 .0019 .510R .0013R .257C D. Face 341 E. Back 341 F. 1650F 2 hrs. G. spray 960F 2 hrs. H. air	A. REINFORCED B. TRADE NAME C. COATING D. CURRENT E. POLARITY F. SHIELD TREATMENT G. TIME SPACER	A. 1. BODY TYPE B. 2. BODY TYPE C. GEAR TYPE D. TOTAL BENDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 2514 B. None	A. 14° L	A. 7 1/4 U	A. - - - P		
A. A 12606 B. 3/13/44 C. 222	A. 1/2" B. R. II C. 1.25-1.28"	A. A 1 B. .11C C. 1.91" hr	A. ACETIC B. ACID C. COATING	A. ANGLE B. BOOT CAP	A. DEPOSITION SIZE EL. B. BOOT TYPE C. PLATE PREPARATION	A. 45° SV B. 3/16" C. Flame cutting	A. .0196 .0019 .510R .0013R .257C D. Face 341 E. Back 341 F. 1650F 2 hrs. G. spray 960F 2 hrs. H. air	A. REINFORCED B. TRADE NAME C. COATING D. CURRENT E. POLARITY F. SHIELD TREATMENT G. TIME SPACER	A. 1. BODY TYPE B. 2. BODY TYPE C. GEAR TYPE D. TOTAL BENDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 2514 B. None	A. 14° L	A. 7 1/4 U	A. - - - P		

IDENTIFICATION	ARMOR DATA		ELECTRODE DATA		JOINT SECTION		WELDING PROCEDURE		HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING	
	A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. PLATE NO.	E. PROCESS	F. PLATE TREATMENT TEMP. TIME	G. BACKING	H. INCLUDED ANGLE	I. TUBE RATE	J. PLATES	K. LOCATION OF HOLE	L. CRACKING	M. TYPE	N. PLATE PREPARATION
A. A 12246 B. 2/12/44 C. 3 H D. Carnegie-Ill. E. McKay Corp. F. Gen'l American Transportation Corporation	A. 1/2"	B. R.I. 1.12Mn .21S1 .014S .011P .80CT .82N1 .18Mo .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. A I 1.11-.112C 4.05-.438 Mn .014S .011P .80CT .82N1 .18Mo .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. 60° SV B. 3116° C. Machining	A. Not given B. 1 5/32" 1a 120 28 2. 1 3/16" 1a 210 25 3. 1 1/4" 1a 320 25 Seal bead- 3/16" 1a 210 2B C. 8 hours. 100°F - 180°F Grinding time 30 minutes Buttering separated 3/16"	A. None B. 140°F	2512	1° L	10° D	IMF	I	8½"	P	1/4" incomplete fusion and slag.
A. A 12246 B. 2/12/44 C. 9 H D. Carnegie-Ill. E. McKay Corp. F. Gen'l American Transportation Corporation	A. 1/2"	B. R.I. 1.12Mn .21S1 .014S .011P .80CT .82N1 .18Mo .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. A I 1.11-.112C 4.05-.438 Mn .014S .011P .80CT .82N1 .18Mo .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. 60° SV B. 1/8" C. Machining	A. None B. 1 5/32" 1a 130 25 2. 1 3/16" 1a 220 25 3. 1 1/4" 1a 310 25 Seal bead- 3/16" 1a 220 25 C. 3½ hours. 100°F-210°F D. Grinding time ½ hour.	A. None B. 150°F	2501	1° L	8½" D	IMF	I	9½"	P	
A. A 12246 B. 3/13/44 C. 10 H D. Carnegie-Ill. E. McKay Corp. F. Gen'l American Transportation Corporation	A. 1/2"	B. R.I. 1.12Mn .19S1 .017P .012S .81Cr .82N1 .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. A I 1.12Mo 1.13Mn .19S1 .017P .012S .81Cr .82N1 .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. 60° SV B. 3116° C. Machining	A. Not given B. 1 5/32" 1a 170 60 2. 1 3/16" 2a 180-190 3. 1 1/4" 1a 300 60 Seal bead- 1/4" 1a 300 60 C. — 130°F-200°F D. —	A. None B. None	2514	2" R	10½" D	IMF	I	16"	P	Weld reinforcement has not been removed.
A. A 12246 B. 3/13/44 C. 10 H D. Carnegie-Ill. E. McKay Corp. F. Crucible Corp. G. Gen'l American Transportation Corporation	A. 1/2"	B. R.I. .24Mo 1.13Mn .19S1 .017P .012S .81Cr .82N1 .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. A I McKay .12C 4.06Mn .56S1 .60Mo .0.35Ni B. Armorloy 6 C. Lime D. DC-REV	A. 60° SV B. 3116° C. Machining	A. Not given B. 1 5/32" 1a 170 60 2. 1 3/16" 2a 180-190 3. 1 1/4" 1a 300 60 Seal bead- 1/4" 1a 300 60 C. — 130°F-200°F D. —	A. None B. None	2524	1" L	10½" U	IMF	I	21½"	P	
A. A 12246 B. 3/13/44 C. 10 H D. Carnegie-Ill. E. McKay Corp. F. Crucible Corp. G. Gen'l American Transportation Corporation	A. 1/2"	B. R.I. .24Mo 1.13Mn .19S1 .017P .012S .81Cr .82N1 .26C Face 364 Back 364 B.O.H. water ⁵ air ⁵	A. A I McKay .12C 4.06Mn .56S1 .60Mo .0.35Ni B. Armorloy 6 C. Lime D. DC-REV	A. 60° SV B. 3116° C. Machining	A. Not given B. 1 5/32" 1a 170 60 2. 1 3/16" 2a 180-190 3. 1 1/4" 1a 300 60 Seal bead- 1/4" 1a 300 60 C. — 130°F-200°F D. —	A. None B. None	2524	1" L	10½" U	IMF	I	30½"	P	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS ETC.						
					A. TYPE	B. THICKNESS	C. COATING	D. BACKING	E. DEPOSITION RATE EL. NO. TYPE AMP. V.	F/R	L.L.	R.L.	C. B.	LOC.	TYPE
A. A 12879 B. 3/17/44 C. 14 H	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. NEW E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. BODY CAP C. PLATE PREPARATION	A. C. GROOVE B. PLATE SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASE TEMPERATURE	A. Copper B. Machining C. Seal bead- 1/4" D. --- E. Weld reinforcement has not been removed.	A. None B. 200°F	5. 2517 L	10"	U	IMP	1	2"	P			
A. A 12879 B. R. I. C. 12H D. Carnegie-Ill. Steel Corp. E. McMay Company F. Gen'l American Transportation Corp.	A. A 1/2" B. R. I. .12" Mn .018P .020S .78CT 1.03N1 .19Mo .26C D. Basic E. Elec. Basic F. 1544°F 2 hr. water 800°F 1 hr. water D. DC-REV	A. 45° SV B. 1/8" C. Machining	A. 45° SV B. 1/8" C. Machining	A. Copper B. 1. 5/32" 2. 1 3/16" 3. 1 1/4" Seal bead- 1/4" C. --- D. Weld reinforcement has not been removed.	A. None B. 180°F	6. 2538 X	10"	D	IMP	1	134	Small amount of slag.			
A. A 12879 B. 3/17/44 C. 13 H	A. A 1/2" (.51") B. R. I. .12" Mn .018P .020S .78CT 1.03N1 .19Mo .26C D. Face 240 Back 340 E. Elec. Basic F. 1544°F water 800°F water	A. 45° SV B. 1/8" C. Machining	A. 45° SV B. 1/8" C. Machining	A. Copper B. 1. 5/32" 2. 1 3/16" 3. 1 1/4" Seal bead- 1/4" C. --- D. Crown bead crack ground and repaired. Weld reinforcement has not been removed.	A. None B. 180°F	4. 2512 R	8"	U	IMP	1	104	P			
A. A 12879 B. 3/17/44 C. 14 H	A. A 1/2" B. R. I. .12" Mn .018P .020S .78CT 1.03N1 .19Mo .26C D. Face 240 Back 340 E. Elec. Basic F. 1544°F water 800°F water	A. 45° SV B. 1/8" C. Machining	A. 45° SV B. 1/8" C. Machining	A. Copper B. 1. 5/32" 2. 1 3/16" 3. 1 1/4" Seal bead- 1/4" C. --- D. Crown bead crack ground and repaired. Weld reinforcement has not been removed.	A. None B. 200°F	1. 2528 L	10"	U	IMP	1	9	P			
A. A 12879 B. 3/17/44 C. 14 H	A. A 1/2" B. R. I. .12" Mn .018P .020S .78CT 1.03N1 .19Mo .26C D. Face 240 Back 340 E. Elec. Basic F. 1544°F water 800°F water	A. 45° SV B. 1/8" C. Machining	A. 45° SV B. 1/8" C. Machining	A. Copper B. 1. 5/32" 2. 1 3/16" 3. 1 1/4" Seal bead- 1/4" C. --- D. Root crack ground and repair- ed. Weld reinforcement has not been removed.	A. None B. 200°F	2. 2532 L	9 1/2	D	IMP	1	1				

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	HEAT	BALLISTIC RESULTS					
						A. GROOVE, INCLUDED ANGLE, BOOT FACE B. TRADE NAME C. CARBON CONTENT D. BHN E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. CURRENT A POLARITY	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE AMP V. C. PLATE PREPARATION 1. ROOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME A INTER PASS TEMPERATURE	A. PRE PASS B. POST PASS	N. VEL.	LOCATION OF R CRACKING
A. AD-780 E. 8/16/43 C. P 2 D. Jones & Laughlin Great Lakes Steel Corp. E. Crucible Steel Co. of America F. Parity-Adrian Mfg. Corp.	A. 1/2" x 10C JWL B. 1.5" x .018P C. .400 D. .25C E. Pace 363 Back 363 F. 1950° F hrs. water 880° F 14 hr.	A. A 1 B. .10C 1.97 C. .2951 D. .018S .013P E. .400 F. .25C	A. 45° SV B. 1/4" x C. Machining Grinding D. Pace 363 Back 363 E. 1950° F hrs. water 880° F 14 hr.	A. Copper B. 1/4" x C. Machining Grinding D. Seal bead - 3/16" 1A 190 20° E. Rezis Cal Titania DC-P-EV	A. 150° B. None	1. 1 5/32" 1A 140 22 2. 11 3/16" 2A 180 26 3. 1 3/1" 1A 190 26 2. 283 X	L	5"	IMP	1	34° P
A. AD-780 E. 8/16/43 C. P 2 D. Jones & Laughlin Great Lakes Steel Corp. E. Crucible Steel Co. of America F. Parity-Adrian Mfg. Corp.	A. 1/2" x 10C JWL B. 1.5" x .018P C. .400 D. .25C E. Pace 363 Back 363 F. 1950° F hrs. water 880° F 14 hr.	A. A 1 B. .10C 1.97 C. .2951 D. .018S .013P E. .400 F. .25C	A. Copper B. 1/4" x C. Machining Grinding D. Seal bead - 3/16" 1A 190 20° E. Rezis Cal Titania DC-P-EV	A. Copper B. 1/4" x C. Machining Grinding D. Seal bead - 3/16" 1A 190 20° E. Rezis Cal Titania DC-P-EV	1. 1 5/32" 1A 140 22 2. 11 3/16" 2A 180 26 3. 1 3/1" 1A 190 26 2. 283 X	L	5 1/2"	IMP	IV	74°	24°

IDENTIFICATION	ADHESIVE DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	TEST	BALLISTIC RESULTS					CRAZING	PENETRATION	RADLOCGRAPHIC RESULTS			
						A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. IRON	E. COATING	F. BACKING	G. DEPOSITION SIZE EL.	H. NO. OF PASS	I. TYPE APP. V.	J. LOCATION OF B	K. LOC. C.B.
A. AD 736 B. #3043 C. 4366 D. Ingersoll Steel E. Alloy Rods Co. F. Ilico Ordnance Corp.	A. 1/2" B. R.I. C. .018" CCS .012" CGP .012" .75N1 .020" MAX .28C D. Face 362 Back 387 E. Elec. Basic F. 1600 F 40 min water spray 100C for 1 hr. water spray I. DC-REV	A. A. 45° F. B. 1/4" C. Galling	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. Copper chill B. 3/16" 1a 165 30 2. 1 1/4" 1a 285 30 3. 1 1/4" 1a 275 30 Seal bead- 3/16" 2a 180 30 20.500" 9.0- 1.10% max B. Armored C. Lime + Ti; water spray I. DC-REV	A. PRE- B. POST	R/A	L.L.	S.L.	C.B.							P. Small amount of slag. Weld is sound.
A. AD 735 B. #3043 C. 4366 D. Ingersoll Steel E. Alloy Rods Co. F. Ilico Ordnance Corp.	A. 1/2" B. R.I. C. .018" CCS .012" CGP .012" .75N1 .020" MAX .28C D. Face 352 Back 387 E. B.C.B. F. 1600 F 40 min water spray 100C for 1 hr. water spray I. DC-REV	A. A. 45° F. B. 1/4" C. Flame cutting grinding	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. Copper chill B. 3/16" 1a 175 30 2. 1 1/4" 2a 275 30 C. 4.5 hours, 70°-410°F D. Grinding time 1/2 hours.	A. PRE- B. POST	R/A	L.L.	S.L.	C.B.						P. Small slag pocket.	
A. AD 735 B. #3043 C. 4366 D. Ingersoll Steel E. Alloy Rods Co. F. Ilico Ordnance Corp.	A. 1/2" B. R.I. C. .018" CCS .012" CGP .012" .75N1 .020" MAX .28C D. Face 352 Back 387 E. B.C.B. F. 1600 F 40 min water spray 100C for 1 hr. water spray I. DC-REV	A. A. 45° F. B. 1/4" C. Flame cutting grinding	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. Copper chill B. 3/16" 1a 175 30 2. 1 1/4" 2a 275 30 C. 4.5 hours, 70°-410°F D. Grinding time 1/2 hours.	A. PRE- B. POST	R/A	L.L.	S.L.	C.B.						P. Small amount of slag pocket.	
A. AD 735 B. #3043 C. 4366 D. Ingersoll Steel E. Alloy Rods Co. F. Ilico Ordnance Corp.	A. 1/2" B. R.I. C. .018" CCS .012" CGP .012" .75N1 .020" MAX .28C D. Face 352 Back 387 E. B.C.B. F. 1600 F 40 min water spray 100C for 1 hr. water spray I. DC-REV	A. A. 45° F. B. 1/4" C. Flame cutting grinding	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. Copper chill B. 3/16" 1a 175 30 2. 1 1/4" 2a 275 30 C. 4.5 hours, 70°-410°F D. Grinding time 1/2 hours.	A. PRE- B. POST	R/A	L.L.	S.L.	C.B.						P. Small amount of slag pocket.	
A. AD 735 B. #3043 C. 4366 D. Ingersoll Steel E. Alloy Rods Co. F. Ilico Ordnance Corp.	A. 1/2" B. R.I. C. .018" CCS .012" CGP .012" .75N1 .020" MAX .28C D. Face 352 Back 387 E. B.C.B. F. 1600 F 40 min water spray 100C for 1 hr. water spray I. DC-REV	A. A. 45° F. B. 1/4" C. Flame cutting grinding	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	A. Copper chill B. 3/16" 1a 175 30 2. 1 1/4" 2a 275 30 C. 4.5 hours, 70°-410°F D. Grinding time 1/2 hours.	A. PRE- B. POST	R/A	L.L.	S.L.	C.B.						P. Small amount of slag pocket.	

IDENTIFICATION	AIRCRAFT DATA	ELECTRODE DATA	JOINT DESIGN	PROBLEMS	BALLISTIC RESULTS				REMARKS ON CRACKING								
					A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. IRON	E. COATING	F. ELECTRODE WIRE	G. PLATE FABRICATOR	H. DEPOSITION SIZE EL.	I. MONT. TYPE	J. BODY TYPE	K. GROOVE TYPE	L. TOTAL WELDING TIME & INTER PASS TEMPERATURE	M. VEL.
A. AF 735 B. 6/20/42 C. 43° D. Great Lakes E. Steel Corp. F. Alloy Rods Co. G. Ilco Ord. Corp. H. B.O.H. I. 1050°F 40 J. 10.7% K. Water spray L. 1 hr. M. Water	A. 1/2" B. H. IV C. .903-.7181 .028S-.024P .05CF-.04M .042F C. .2°C D. Face 37° Back 37° E. B.O.H. F. 1050°F 40 G. Water spray H. Type 4711 I. LC-EV	A. GROOVE INCLUDED ANGLE. ROOT FACE B. ROOT CAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKLING B. FLAME CUTTER- IN. 1. 2/16" 16 165 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. GRINDING TIME : HOUR.	A. Copper chill B. Flame cutter- in. 1. 2/16" 16 165 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. Grinding time : hour.	A. PLATE POST B. PLATE POST	A. None 1 B. None	2529	1t R	82"	S1 IMP	I	124	P				
A. AF 736 B. 6/20/42 C. 43° D. Great Lakes E. Steel Corp. F. Alloy Rods Co. G. Ilco Ord. Corp. H. B.O.H. I. 1050°F 40 J. 10.7% K. Water spray L. 1 hr. M. Water	A. A 1 B. H. IV C. .903-.7181 .028S-.024P .05CF-.04M .042F C. .2°C D. Face 37° Back 37° E. B.O.H. F. 1050°F 40 G. Water spray H. Type 4711 I. LC-EV	A. GROOVE INCLUDED ANGLE. ROOT FACE B. ROOT CAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKLING B. FLAME CUTTER- IN. 1. 2/16" 16 165 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. GRINDING TIME : HOUR.	A. Copper chill B. Flame cutter- in. 1. 2/16" 16 165 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. Grinding time : hour.	A. PLATE POST B. PLATE POST	A. None 1 B. None	2515	1t R	82"	S1 IMP	I	124	P				
A. AF 734 B. 6/11/42 C. 43° D. Great Lakes E. Steel Corp. F. Alloy Rods Co. G. Ilco Ord. Corp. H. B.O.H. I. 1050°F 40 J. 10.7% K. Water spray L. 920°F	A. A 1 B. H. IV C. .903-.7181 .028S-.024P .05CF-.04M .042F C. .2°C D. Face 37° Back 37° E. B.O.H. F. 1050°F 40 G. Water spray H. Type 4711 I. LC-EV	A. GROOVE INCLUDED ANGLE. ROOT FACE B. ROOT CAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKLING B. FLAME CUTTER- IN. 1. 2/16" 16 150 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. GRINDING TIME : HOUR.	A. Copper chill B. Flame cutter- in. 1. 2/16" 16 150 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. GRINDING TIME : HOUR.	A. PLATE POST B. PLATE POST	A. None 1 B. None	2522	2t L	9"	-	-	-	F				
A. AF 734 B. 6/11/42 C. 43° D. Great Lakes E. Steel Corp. F. Alloy Rods Co. G. Ilco Ord. Corp. H. B.O.H. I. 1050°F 40 J. 10.7% K. Water spray L. 920°F	A. A 1 B. H. IV C. .903-.7181 .028S-.024P .05CF-.04M .042F C. .2°C D. Face 37° Back 37° E. B.O.H. F. 1050°F 40 G. Water spray H. Type 4711 I. LC-EV	A. GROOVE INCLUDED ANGLE. ROOT FACE B. ROOT CAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKLING B. FLAME CUTTER- IN. 1. 2/16" 16 150 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. GRINDING TIME : HOUR.	A. Copper chill B. Flame cutter- in. 1. 2/16" 16 150 2P 2. 6.3. 1/4" 3A 265 3C 3. 34 hours. 250°-260°F D. GRINDING TIME : HOUR.	A. PLATE POST B. PLATE POST	A. None 1 B. None	2522	X	82"	S1 IMP	I	224					

IDENTIFICATION	ADMET DATA	ELECTRODE DATA	JOINT ACTION	WELDING		PROCEDURE		HEAT	BALLISTIC RESULTS	
				A. GROOVE, INCLINED ANGLE, ROOT TACK B. ROOT GAP C. PLATE PREPARATION	D. DEPOSITION SITE EL. NO. TYPE AMP.	E. BACHTIG 1. BOOT TYPE 2. BOOT TYPE 3. CROWN TYPE	F. LOCATION OF # CRACKING			
REMARKS ON CRACKING PARAGRAPHIC RESULTS, ETC.										
A. AD 716 B. C120/43 C. 4561 D. Great Lakes Steel E. Alloy Rods Co. F. Tico Ordnance Corp.	A. 1/2" B. Hard Homo .900In C. CARBON CONTENT .024P .024R .23%O G. .28C H. Face 376 I. B.O.H. F. 1650°F 40 min water spray 1650°F 1 hr. water spray	A. TYPE TANK BASE COATING C. CURRENT A POLARITY TEMP. TIME DEPTH, TIME, CURRENT	A. GROOVE, INCLINED ANGLE, ROOT TACK B. ROOT GAP C. PLATE PREPARATION	A. 90° DV B. 1/4" C. Grinding	B. DEPOSITION SITE EL. NO. TYPE AMP.	C. 3 hours 70°F-200°F D. Grinding time 40 minutes	A. PRE- S. POST	A. PRE- S. POST	A. PRE- S. POST	
A. AD 867 B. 6/27/43 C. 4400 D. Great Lakes Steel E. A.O.Smith F. Tico Ordnance Corp.	A. 1/2" B. R.TV .902In C. 7031 .0236 .0407 .2000 G. .28C H. Face 376 I. B.O.H. F. 1650°F 40 min water 1650°F 1 hr. 6 min. water	A. TYPE TANK BASE COATING C. CURRENT A POLARITY TEMP. TIME DEPTH, TIME, CURRENT	A. GROOVE, INCLINED ANGLE, ROOT TACK B. ROOT GAP C. PLATE PREPARATION	A. 45° SV B. 1/4" C. Grinding	B. DEPOSITION SITE EL. NO. TYPE AMP.	C. 3 hours 70°F-200°F D. Grinding time 1/2 hour.	A. PRE- S. POST	A. PRE- S. POST	A. PRE- S. POST	
A. AD 884 B. 9/14/43 C. 4400 D. Great Lakes Steel E. A.O.Smith F. Tico Ordnance Corp.	A. 1/2" B. Hard Homo .900In C. 7031 .0191 .0025 .0027 G. .28C H. Face 376 I. B.O.H. F. 1650°F 40 min water 940°F 1-1/4 hrs. water	A. TYPE TANK BASE COATING C. CURRENT A POLARITY TEMP. TIME DEPTH, TIME, CURRENT	A. GROOVE, INCLINED ANGLE, ROOT TACK B. ROOT GAP C. PLATE PREPARATION	A. 90° DV B. 1/4" C. Grinding	B. DEPOSITION SITE EL. NO. TYPE AMP.	C. 3 hours 70°F-200°F D. Grinding time 1 hour.	A. PRE- S. POST	A. PRE- S. POST	A. PRE- S. POST	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS			RESULTS ON CRACKING			RADIOPHASIC RESULTS, ETC.
					A. PRE	B. POST	C. L.L. R.R. C.B. LOC.	D. CRACKING TYPE	E. A.R.T.		
A. Firing Sequence No. B. Date of Test C. Plate No. D. Armor Manufacturer E. Electrode Manufacturer F. Armor Fabricator	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. BM E. PROCEAR F. HEAT TREATMENT TEMP. TIME G. TIME SPACER	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL VELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST C. PASSES D. TYPE AMP. V. E. ROOT TYPE F. ROOT TIME G. TOTAL VELDING TIME & INTER PASS TEMPERATURE	A. 2506	X	12.2 TMH	I	12"	P	
A. AD 775 B. 7/29/42 C. 430 D. Ingersoll E. Steel Corp. F. Alloy Corp. G. 1000 H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. A 7 B. Hard Hromo. .600-.0125 .750-.750 C. 0125 D. 010P E. 005T F. .75W G. 20.5CT H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. 45° 3/4" B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. Copper B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. None B. None	2 2503 3 2640	12" R 3" S 19" TMP 17" TMP	I	14"	-		
A. AD 776 B. 7/29/42 C. 440 D. Ingersoll E. Steel Company F. Alco Ordnance G. 1000 H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. A 7 B. Hard Hromo. .600-.0125 .750-.750 C. 0125 D. 010P E. 005T F. .75W G. 20.5CT H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. 45° 3/4" B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. Copper B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. None B. None	2 2504 3 2641	12" R 3" S 17" D 19" TMP 17" TMP	V	14"	-		
A. AD 777 B. 7/29/42 C. 440 D. Ingersoll E. Steel Company F. Alco Ordnance G. 1000 H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. A 7 B. Hard Hromo. .600-.0125 .750-.750 C. 0125 D. 010P E. 005T F. .75W G. 20.5CT H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. 45° 3/4" B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. Copper B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. None B. None	2 2505 3 2642	12" R 3" S 17" D 19" TMP 17" TMP	V	14"	-		
A. AD 778 B. 7/29/42 C. 440 D. Ingersoll E. Steel Company F. Alco Ordnance G. 1000 H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. A 7 B. Hard Hromo. .600-.0125 .750-.750 C. 0125 D. 010P E. 005T F. .75W G. 20.5CT H. Face 35° I. Back 287 J. R.O.H. K. 1000 L. Face 35° M. Back 287 N. Water	A. 45° 3/4" B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. Copper B. Flare screen- ing C. 1 min. D. 0.5 sec. E. 20.5CT F. Face 35° G. Back 287 H. R.O.H. I. 1000 J. Face 35° K. Back 287 L. Water	A. None B. None	2 2506 3 2643	12" R 3" S 17" D 19" TMP 17" TMP	V	14"	-		

IDENTIFICATION	ARCING DATA		ELECTRODE DATA		JOINT DESIGN		WELDING PROCEDURE		TEST		BALLISTIC RESULTS		REMARKS ON CRACKING				
	A. PLATE THICKNESS	B. TYPE	A. TRADE NAME	B. BACKING	C. ANGL. . ROOT FACE	D. ANGL. . ROOT CAP	E. PLATE PREPARATION	F. DIAFUSION SIZE EL. NO. TYPE AMP. V.	G. PASSES	H. PRE.	I. POST	J. LOC.	K. TYPE ANT.	L. L. C. B.	M. C. B.	N. LOCATION OF S	O. CRACKING
A. AD 779 B. 8/5, e/43 C. 4404 D. Great Lakes Steel E. A.O. Smith F. Tico Ordnance Corp.	A. 1/2" B. Hard Homo. IV .90m .7281 .028S .024P .630T .2329 C. Face 352 D. Face 352 E. Back 376 F. 1650°F 40 min water 5°F 1 hr. water	A. A 1 .08-.12C 3.20- 3.70m .50-.75S1 18.00- 18.50T 9.0-10.5 1.0-1.2Mo SW-164 C. Lime DC-REV	A. 90° DV B. 1/4" C. Grinding	A. Copper chill B. 1. 3/16" 1a 170 28 2. 1/4" 2a 240 30 C. 5 hours. 80°F - 160°F D. Grinding time 1 hour.	A. None B. None	1 2541 2 2524	IMP U IMP X	1 1/2" L 5" D	IMP IMP	1 14"	P V	Small amount of porosity and slag throughout the weld.					
A. AD 779 B. 8/5, e/43 C. 4404 D. Ingersoll Steel Co. E. A.O. Smith F. Tico Ordnance Corp.	A. 1/2" B. Hard Homo. I .89m 1.0S1 .012S .019P .22Mo .63T .75N1 C. 26~ D. Face 352 E. Back 387 F. 1600°F 40 min water 5°F 1 hr. water	A. A 1 .08-.12C 3.20- 3.70m .50-.75S1 16.0-18.5 Cr 9.0-10.5 1.0-1.2Mo SW-164 C. Lime DC-REV	A. Copper chill B. 1. 3/16" 1a 170 28 2. 1/4" 2a 240 30 C. 5 hours. 70°F-200°F D. Grinding time 3/4 hour.	A. None B. None	1 2565 2 2527 3 2527	IMP U IMP L IMP L	1 1/2" L 2 1/2" L 3 1/2" L	et D et D et U	1 34"	P V	Small amount of porosity and small amount of slag.						

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS						REMARKS ON CRACKING		
					A. GROOVE INCLUDED ANGLE, BOOT FACE	B. ROOT CAP	C. PLATE PREPARATION	A. BACKING	B. DEPOSITION SIZE EL. BO. TYPE ABP. V.	PASSES	A. PRE. #	B. POST. #	C. LOCATION OF R.
A. A 10025 B. 11/16/43 C. EW 4411 D. Great Lakes E. A.O. Smith F. Ilco Ordnance Corporation	A. 1/2" B. R IV .88in .74S1 .018S .016P .002r .002r C. .28C D. Back 341 E. B.O.H. F. 1650 F	A. A 1 B. .08-.12C 3.20-3.70 C. Flame cutting D. Current A Polarity TEMP. TIME QUENCH	A. 90° DV B. 1/4" C. Flame cutting	A. COPPER CHILL B. 1. I 3/16" 1a 130 30 2. 8 3. 1/4" 2a 290 35 C. 34 hours. 70° F-200° F D. Grinding time 1½ hours.	A. None B. None	1 2619	2 2514	2 3½" R U	IMF V	2½	P	14"	Small amount of S.I.B.E.
A. A 1130c B. 2/4/44 C. EW 4414 D. Great Lakes E. A.O. Smith F. Ilco Ordnance Corporation	A. 1/2" B. R IV .88in .65S1 .023S .019P .0012B .0012B C. .28C D. Back 363 E. B.O.H. F. 1650 F	A. A 1 B. .08-.12C 3.20-3.70 C. Grinding	A. COPPER CHILL B. 1/4" C. Grinding	A. None B. None	1 2525	2 2524	2 2523	2 2522 L	10½" D U	10½	P	-	-
A. A 1130c B. 2/4/44 C. EW 4414 D. Great Lakes E. A.O. Smith F. Ilco Ordnance Corporation	A. 1/2" B. R IV .88in .65S1 .023S .019P .0012B .0012B C. .28C D. Back 363 E. B.O.H. F. 1650 F	A. 90° DV B. 1/4" C. Grinding	A. COPPER CHILL B. 1. I 3/16" 1a 130 30 2. 8 3. 1/4" 1a 130 30 3. 1/4" 2a 230 35 C. 34 hours. 70° F-200° F D. Grinding time 1½ hours.	A. None B. None	1 2525	2 2524	3 2523	3 2522 L	10½" D U	10½	P	-	-
A. A 1130c B. 2/4/44 C. EW 4414 D. Great Lakes E. A.O. Smith F. Ilco Ordnance Corporation	A. 1/2" B. R IV .88in .65S1 .023S .019P .0012B .0012B C. .28C D. Back 363 E. B.O.H. F. 1650 F	A. 90° DV B. 1/4" C. Grinding	A. COPPER CHILL B. 1/4" C. Grinding	A. None B. None	1 2525	2 2524	3 2523	3 2522 L	10½" D U	10½	P	-	-
A. A 1130c B. 2/4/44 C. EW 4414 D. Great Lakes E. A.O. Smith F. Ilco Ordnance Corporation	A. 1/2" B. R IV .88in .65S1 .023S .019P .0012B .0012B C. .28C D. Back 363 E. B.O.H. F. 1650 F	A. 90° DV B. 1/4" C. Grinding	A. COPPER CHILL B. 1/4" C. Grinding	A. None B. None	1 2525	2 2524	3 2523	3 2522 L	10½" D U	10½	P	-	-
A. A 1130c B. 2/4/44 C. EW 4414 D. Great Lakes E. A.O. Smith F. Ilco Ordnance Corporation	A. 1/2" B. R IV .88in .65S1 .023S .019P .0012B .0012B C. .28C D. Back 363 E. B.O.H. F. 1650 F	A. 90° DV B. 1/4" C. Grinding	A. COPPER CHILL B. 1/4" C. Grinding	A. None B. None	1 2525	2 2524	3 2523	3 2522 L	10½" D U	10½	P	-	-

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS			RESULTS ON CRACKING										
					A. TYPE	B. THICKNESS	C. COATING	D. CURRENT A	E. POLARITY	F. HEAT TREATMENT TEMP.	G. TIME OVERHEAT	H. PRE-PASS	I. POST-PASS	J. LOCATION OF B	K. CRACKING	L. TYPE	M. AMT	N. DEPOSITION SIZE EL.
A. A 12807 B. 3/21/44 C. Hw 3 D. Great Lakes Steel Corp. Jones & Laughlin E. Crucible Steel CO. F. W.B. Jarvis Co.	A. 1/2" B. R TV GL • 84In • 6151 • 0365 • 023P • 45CT • 19MC • .072Zr C. .26G D. Pace 363 Back 363 E. B.O.H. F. 1650°F + hr. water 65°F 1½ hr. air	A. 45° SV B. 1/4" C. Machining	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. 1. POOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. SPARKS	A. 200°F B. None	3 2510	3 ½ 10° L U - - -	4 2522	3 ½ 5° L D - - -	5 2623	3 ½ 9° R U 1 18°	P						
A. A 12807 B. 3/21/44 C. Hw 3 D. Great Lakes Steel Corp. Jones & Laughlin E. Crucible Steel CO. F. W.B. Jarvis Co.	A. 1/2" B. R TV GL • 84In • 6151 • 0365 • 023P • 45CT • 19MC • .072Zr C. .26G D. Pace 363 Back 363 E. B.O.H. F. 1650°F + hr. water 65°F 1½ hr. air	A. Copper B. 1/4" C. Machining	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. 1. POOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. SPARKS	A. 200°F B. None	3 2510	3 ½ 10° L U - - -	4 2522	3 ½ 5° L D - - -	5 2623	3 ½ 9° R U 1 18°	P						

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.			
					A. PRE	B. POST	C. TYPE	D. DEPOSITION SIZE EL. NO. TYPE APP. V	E. BACKING	F. ANGLE - ROOT FACE	G. PLATE PREPARATION	H. LOCATION OF H. CRACKING
A. FIBER GLASS NO.	A. PLATE THICKNESS	A. TYPE	A. GROOVE	A. BACKING								
B. DATE OF TEST	B. TYPE	B. TRADE NAME	B. DEPOSITION SIZE	B. DEPOSITION SIZE								
C. PLATE NO.	C. CARBON CONTENT	C. COATING	C. NOOT TYPE	C. NOOT TYPE								
D. ARMOR MANUFACTURER	E. MM	F. CURRENT A	G. PLATE PREPARATION	H. PLATE PREPARATION								
E. ELECTRODE INPUT	F. AMPS	G. POLARITY	H. GROOVING	I. GROOVING								
F. ARMOR TREATMENT	G. TEMP. TIME	H. SPECIES	I. TOTAL WELDING TIME & INTER PASS	J. TEMPERATURE								
A. AD 775	A. 1/2"	A. A I	A. 45° SV	A. COPPER	A. 61.00	1	2533	X	5"	IMF	I	11 1/8 P
B. 8/3/43	B. R III Y	C. .14C	B. 1/4"	B. N/A	B. N/A				U			
C. 794	D. 1.40-.1.68in	E. 1.91in	C. Flame cutting	1. 5/32"	1a	120	60					
D. Youngstown	E. 18-.1961	F. .4061	D. Flame softening	2. 5/32"	1a	120	60					
E. Sheet & Tube	F. .026-.0606	G. .0106	H. Grinding.	3. 5/32"	2b	120	80					
F. Great Lakes	G. .016-.0190	H. .025P	I. Grinding.	J. 5/32"	3b	120	80-90					
G. Crucible Steel	H. .02-.03CR	I. 14.90-	J. Seal bead-	K. 5/32"	L. 5/32"	M. 5/32"	N. 5/32"	O. 5/32"	P. 5/32"	IMF	I	5"
H. Company	I. .03-.04%	J. 15.51CR	K. Seal bead-	L. 5/32"	M. 5/32"	N. 5/32"	O. 5/32"	P. 5/32"	Q. 5/32"	IMF	I	1 1/8
I. Kalmar Stove	J. .27-.30%	K. 6.60Ni	L. C. e hours 85°F-200°F	M. 5/32"	N. 5/32"	O. 5/32"	P. 5/32"	Q. 5/32"	R. 5/32"	IMF	I	1 1/8
J. & Furnace Co.	K. .24-.25C	L. 1.20Mo	M. D. Grinding time e hours.	N. 5/32"	O. 5/32"	P. 5/32"	Q. 5/32"	R. 5/32"	S. 5/32"	IMF	I	1 1/8
K. Back 263	L. Pace 352	M. Residual	N. D. DC-REV	O. 5/32"	P. 5/32"	Q. 5/32"	R. 5/32"	S. 5/32"	T. 5/32"	IMF	I	1 1/8
L. B.O.B.	M. 1600°F + hr.	N. Titanium	O. water	P. 5/32"	Q. 5/32"	R. 5/32"	S. 5/32"	T. 5/32"	U. 5/32"	IMF	I	1 1/8
M. water	N. 870°F 1 1/2 hr.	O. water	P. water	Q. 5/32"	R. 5/32"	S. 5/32"	T. 5/32"	U. 5/32"	V. 5/32"	IMF	I	1 1/8
N. 1/2"	O. A. 1/2"	P. B. K. IV GL	Q. A. 1/2"	R. B. K. IV GL	S. C. .260	T. D. .260	U. E. .260	V. F. .260	W. G. .260	IMF	I	1 1/8
O. water	P. A. .91in	Q. B. .91in	R. C. .91in	S. D. .91in	E. E. .91in	F. F. .91in	G. G. .91in	H. H. .91in	I. I. .91in	IMF	I	1 1/8
P. .0225	Q. .0225	R. .0225	S. .0225	T. .0225	U. .0225	V. .0225	W. .0225	X. .0225	Y. .0225	IMF	I	1 1/8
Q. .0725	R. .0725	S. .0725	T. .0725	U. .0725	V. .0725	W. .0725	X. .0725	Y. .0725	Z. .0725	IMF	I	1 1/8
S. .0725	T. .0725	U. .0725	V. .0725	W. .0725	X. .0725	Y. .0725	Z. .0725	.0725	.0725	IMF	I	1 1/8
U. .0725	V. .0725	W. .0725	X. .0725	Y. .0725	Z. .0725	.0725	.0725	.0725	.0725	IMF	I	1 1/8
W. .0725	X. .0725	Y. .0725	Z. .0725	.0725	.0725	.0725	.0725	.0725	.0725	IMF	I	1 1/8
X. .0725	Y. .0725	Z. .0725	.0725	.0725	.0725	.0725	.0725	.0725	.0725	IMF	I	1 1/8
Y. .0725	Z. .0725	.0725	.0725	.0725	.0725	.0725	.0725	.0725	.0725	IMF	I	1 1/8
Z. .0725	.0725	.0725	.0725	.0725	.0725	.0725	.0725	.0725	.0725	IMF	I	1 1/8

IDENTIFICATION	ARMOR DATA		JOINT DESIGN DATA		WELDING PROCEDURE		TEST		BALLISTIC RESULTS		REPORTS OR CHARTING					
	A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. IRON	E. PHOSPHORUS	F. MEAT TREATMENT TEMP.	G. TIME QUENCH	H. TRADE NAME	I. COATING	J. CURRENT	K. DEPOSITION RATE	L. NO. OF PASS	M. TYPE AMP.	N. SIZE EL.	O. LOCATION OF B	P. CRACKING
A. AD 912 B. 10/2/52 C. B47-44 D. Youngstown Steel - Great Lakes Steel - Steel-Cel-Structile Company E. Kalamazoo Gove & Purcase Co.	A. 1/2" B. Rilly C. 1.68mn D. .0205-.015P .0220 .024C .24C Face 341 Back - B.O.B. 1650F water air	A. A 1 B. Rilly C. 1.68mn D. .0205-.015P .0220 .024C .24C Face 341 Back - B.O.B. 1650F water air	A. 45° SV B. 1/4" C. .21mn .23S1 .19.32Cr .0.51Ni .78% B. Resistal C. Titanium D. DC+EV	A. BACKING B. ROOT CAP C. PLATE PREPARATION	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. 1. ROOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE POST B. F/S	A. VEL. B. L.L. C. M.L. D. C.B.	A. IMP. B. IMP. C. IMP. D. IMP.	A. 24° P B. 24° P C. 24° P D. 24° P	A. 24° P B. 24° P C. 24° P D. 24° P	A. 24° P B. 24° P C. 24° P D. 24° P				
A. AD 912 B. 10/2/52 C. B47-44 D. Youngstown Steel - Great Lakes Steel - Steel-Cel-Structile Company E. Kalamazoo Gove & Purcase Co.	A. 1/2" B. Rilly C. 1.68mn D. .0205-.015P .0220 .024C .24C Face 341 Back - B.O.B. 1650F water air	A. A 1 B. Rilly C. 1.68mn D. .0205-.015P .0220 .024C .24C Face 341 Back - B.O.B. 1650F water air	A. 45° SV B. 1/4" C. .21mn .23S1 .19.32Cr .0.51Ni .78% B. Resistal C. Titanium D. DC+EV	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. 1. ROOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE POST B. F/S	A. VEL. B. L.L. C. M.L. D. C.B.	A. IMP. B. IMP. C. IMP. D. IMP.	A. 24° P B. 24° P C. 24° P D. 24° P	A. 24° P B. 24° P C. 24° P D. 24° P	A. 24° P B. 24° P C. 24° P D. 24° P				
A. AD 912 B. 10/2/52 C. B47-44 D. Youngstown Steel - Great Lakes Steel - Steel-Cel-Structile Company E. Kalamazoo Gove & Purcase Co.	A. 1/2" B. Rilly C. 1.68mn D. .0205-.015P .0220 .024C .24C Face 341 Back - B.O.B. 1650F water air	A. A 1 B. Rilly C. 1.68mn D. .0205-.015P .0220 .024C .24C Face 341 Back - B.O.B. 1650F water air	A. 45° SV B. 1/4" C. .21mn .23S1 .19.32Cr .0.51Ni .78% B. Resistal C. Titanium D. DC+EV	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. 1. ROOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE POST B. F/S	A. VEL. B. L.L. C. M.L. D. C.B.	A. IMP. B. IMP. C. IMP. D. IMP.	A. 24° P B. 24° P C. 24° P D. 24° P	A. 24° P B. 24° P C. 24° P D. 24° P	A. 24° P B. 24° P C. 24° P D. 24° P				

IDENTIFICATION	ABSORB DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	TEST	BALLISTIC RESULTS			REMARKS OR CRACKING		
							A. TYPE	B. TRADE NAME	C. CARBON CONTENT	D. CURRENT & POLARITY	E. POSITION SIZE EL. 80. TYPE AMP. V.	F. LOCATION OF S. CRACKING
A. RISING RECORD NO. B. DATE OF TEST C. PLATE NO. D. ABSORB MANUFACTURER E. ELECTRODE MANU. F. LIGHT FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. SIZE E. PROCESS F. SEAL TREATMENT TEMP. TIME OPERATE	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. VACUUM B. 3/16"	PAPER	A. PRE- B. POST-	E	VOL.	L.L.	S.L.	C. B.	LOC.	TYPE AND
A. AD 483 B. 6/16/43 C. 4349 D. Ingersoll Steel E. Mc Kay Company F. Harmon- Herrington Co.	A. 1/2" B. R 1 .82 Mn .90Si .0108 .016P .62CT .67Ni .30Mo .30C D. Pace 375 Back 363 E. Elec. Basic F. 1600°F 40 min water spray 1080°F 60 min B. Armorloy furnace C. Calcium D. DC-REV	A. A II .096-.10C 4.16- 4.18m -48- .66981 .0115 .30C D. Pace 376 Back 363 E. Elec. Basic F. 1600°F 40 min water spray 1080°F 60 min B. Armorloy furnace C. Calcium D. DC-REV	A. 45° SV B. 3/16" C. Grinding	1. 1 3/16" 1a 145- 2. 1 3/16" 2a 145- 3. 1 3/16" 1a 170- Seal bead- 1/4" 1a 200- C. 10:30 hours. 90°-200°F D. Grinding time 3:36 hours.	A. None B. None	1 2628 2 2510	1" L X	84" U O	IMP TMH	I 18" V	P 1 1/2 TMH V	444
A. AD 485 B. 6/10/43 C. 4350 D. Ingersoll Steel E. Mc Kay Company F. Harmon- Herrington Co.	A. 1/2" B. R 1 .82 Mn .90Si .0108 .016P .62CT .67Ni .30Mo .30C D. Pace 375 Back 363 E. Elec. Basic F. 1600°F 40 min water spray 1080°F 60 min B. Armorloy furnace C. Calcium D. DC-REV	A. A II .096-.10C 4.16- 4.18m -48- .66981 .0115 .30C D. Pace 375 Back 363 E. Elec. Basic F. 1600°F 40 min water spray 1080°F 60 min B. Armorloy furnace C. Calcium D. DC-REV	A. 45° SV B. 3/16" C. Grinding	1. 1 3/16" 1a 145- 2. 1 3/16" 2a 145- 3. 1 1/4" 1a 185- Seal bead- 1/4" 1a 200- C. 9 1/2 hours. 180°-260°F D. Grinding time 3:32 hours.	A. None B. None	1 2547 2 2475	1" R R	64" U R	IMP TMH	I 25°	P Weld is sound. Small amount of slag. 1/2" of incomplete fusion.	
A. AD 483 B. 6/16/43 C. 4361 D. Ingersoll Steel E. Mc Kay Company F. Harmon- Herrington Co.	A. 1/2" B. R 1 .82 Mn .90Si .0108 .016P .62CT .67Ni .30Mo .30C D. Pace 375 Back 363 E. Elec. Basic F. 1600°F 40 min water spray 1080°F 60 min B. Armorloy furnace C. Calcium D. DC-REV	A. A II .096-.10C 4.16- 4.18m -48- .66981 .0115 .30C D. Pace 375 Back 363 E. Elec. Basic F. 1600°F 40 min water spray 1080°F 60 min B. Armorloy furnace C. Calcium D. DC-REV	A. 45° SV B. 3/16" C. Grinding	1. 1 3/16" 1a 145- 2. 1 3/16" 2a 145- 3. 1 1/4" 1a 185- Seal bead- 1/4" 1a 210- C. 1 1/2 hours. 90°F-200°F D. Grinding time 4:30 hours.	A. None B. None	1 2600 2 2524	1" L R	72" U U	IMP IMP	I 134° V 1 1/2 IMP	P 4" Small amount of slag. Weld is sound.	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA		JOINT DESIGN		WELDING PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING			
		A. TYPE	B. TRADE NAME	C. CARBON CONTENT	D. CURCUM	E. PLATE PREPARATION	F. DEPOSITION SIZE EL.	G. NO. TYPE AMP. V.	H. PAZ	I. POST	J. VOL.	K. LOCATION OF H	L. CHASING
A. AD 719 B. 6/30/43 C. 4356 D. Great Lakes Steel E. McKay Company F. Marmon-Herrington Co.	A. PLATE THICKNESS B. TYPE C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRONIC SPEC. F. ARMOR FABRICATOR	A. 1/2"	A. Hard Homo. IV B. .82 Mn C. .81S1 D. .022C .015P E. .023CT .25Mo F. .27Cr .25Mo G. .077F	A. GROOVE, INCLUDED ANGLE, ROOT CAP B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. C. BOTT TYPE D. CAGE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. 45° SV B. 1/4" C. Grinding	A. 106-114 B. 4.06-4.53 C. Mn D. .47-.55S1 E. .02-S F. .025P G. 18.55- H. 19.48CT I. 0.12- J. 0.75NI K. ARMORLOY L. Lime M. A-6 N. DC-REV	A. DEPOSITION SIZE EL. B. BOTT TYPE C. CAGE TYPE D. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 1 2530 B. 2 2417	A. 24" U B. 1 1/2" L C. 5" D	A. 18" P B. 16" 34"	Small amount of porosity and slag.
A. AD 719 B. 6/30/43 C. 4357 D. Great Lakes Steel E. McKay Company F. Marmon-Herrington Co.	A. PLATE THICKNESS B. TYPE C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRONIC SPEC. F. ARMOR FABRICATOR	A. 1/2"	A. Hard Homo. IV B. .82 Mn C. .81S1 D. .022C .015P E. .023CT .25Mo F. .27Cr .25Mo G. .077F	A. GROOVE, INCLUDED ANGLE, ROOT CAP B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. C. BOTT TYPE D. CAGE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. 45° SV B. 1/4" C. Grinding	A. 106-114 B. 4.06-4.53 C. Mn D. .47-.55S1 E. .02-S F. .025P G. 18.55- H. 19.48CT I. 0.12- J. 0.75NI K. ARMORLOY L. Lime M. A-6 N. DC-REV	A. DEPOSITION SIZE EL. B. BOTT TYPE C. CAGE TYPE D. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 1 2525 B. 2 2516 C. 3 2522 D. 4 2522	A. 4" R B. 5" U C. 6" D D. 6" O	A. 13 1/2" P B. - - - C. - - - D. - - -	Small amount of slag. 5/8" intermittent incomplete penetration.
A. AD 719 B. 6/30/43 C. 4358 D. Great Lakes Steel E. McKay Company F. Marmon-Herrington Co.	A. PLATE THICKNESS B. TYPE C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRONIC SPEC. F. ARMOR FABRICATOR	A. 1/2"	A. Hard Homo. IV B. .82 Mn C. .81S1 D. .022S .015P E. .023CT .25Mo F. .27Cr .25Mo G. .077F	A. GROOVE, INCLUDED ANGLE, ROOT CAP B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. C. BOTT TYPE D. CAGE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. 45° SV B. 1/4" C. Grinding	A. 106-114 B. 4.06-4.53 C. Mn D. .47-.55S1 E. .02-S F. .025P G. 18.55- H. 19.48CT I. 0.12- J. 0.75NI K. ARMORLOY L. Lime M. A-6 N. DC-REV	A. DEPOSITION SIZE EL. B. BOTT TYPE C. CAGE TYPE D. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. None B. None	A. 1 2516 B. 2 2522 C. 3 2404 D. 4 2392	A. 8" L B. 4 1/2" L C. 12" R D. 6 1/2" U	A. 13" P B. 1 1/2" 28" P C. 3 1/2" - D. - - -	Small amount of slag and intermittent penetration.
A. AD 719 B. 6/30/43 C. 4359 D. Great Lakes Steel E. McKay Company F. Marmon-Herrington Co.	A. PLATE THICKNESS B. TYPE C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRONIC SPEC. F. ARMOR FABRICATOR	A. 1/2"	A. Hard Homo. IV B. .82 Mn C. .81S1 D. .022S .015P E. .023CT .25Mo F. .27Cr .25Mo G. .077F	A. GROOVE, INCLUDED ANGLE, ROOT CAP B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. C. BOTT TYPE D. CAGE TYPE E. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. 45° SV B. 1/4" C. Grinding	A. 106-114 B. 4.06-4.53 C. Mn D. .47-.55S1 E. .02-S F. .025P G. 18.55CT H. 9.75NI I. ARMORLOY J. Lime K. DC-REV	A. DEPOSITION SIZE EL. B. BOTT TYPE C. CAGE TYPE D. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. Not Given B. "	A. 1 2516 B. 2 2522 C. 3 2404 D. 4 2392	A. 8" L B. 4 1/2" L C. 12" R D. 6 1/2" U	A. 13" P B. 1 1/2" 28" P C. 3 1/2" - D. - - -	Small amount of slag and intermittent penetration.

TEST IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.
					A. PRE	B. POST	F/S	L/L	R/L	C. B.	
A. FUSING ARMOR CO. B. DATE OF TEST C. PLATE NO. D. PLATE MANUFACTURER E. ELECTRODE NO. F. Armor Associates	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. PWP E. PROCESST F. HEAT TREATMENT TIME, TIME GROWTH	A. TYPE B. TRADE NAME C. COATING D. CURRENT & POLARITY	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. DEPOSITION SIZE EL. NO. TYPE AMP. V. 1. ROOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME A INTER PASS TEMPERATURE							
A. AD 719 B. 6/30/43 C. 4371 D. Great Lakes E. McKay Company F. Marmon- Perrin-Gton Co.	A. 1/2" B. Hard Homo. C. 8061 D. .0245-.022P E. .010R-.020O F. .070T G. .24C H. Face 340 I. Back 345 J. E.C.C.H. K. 1650°F 40 min L. water M. 94°C 1 hr N. 10 min. O. Surface P. Lime Q. DC-FeV	A. A II B. .106-.11C C. .0245-.022P D. .010R-.020O E. .070T F. .24C G. Face 340 H. Back 345 I. E.C.C.H. J. 1650°F 40 min K. water L. 94°C 1 hr M. 10 min. N. Surface O. Lime P. DC-FeV	A. COPPER B. 1/4" C. Grinding	A. 60° SW B. 3/16" C. Grinding	A. 1. 3/16" 1a 185 - B. 1. 3/16" 1a 175 - C. 1. 1/4" 1a 220 - D. Seal bead- 3/16" 1a 126 - E. 5 hours. 200°-240° F. Grinding time 22 minutes.	A. N/A B. None	1 2521 2 2511	U U 2 3/16" L 3 3/16" TMP	1 10° 1 2° 12°	P Small amount of porosity and slag. Weld is sound.	
A. AD 719 B. 6/30/43 C. 4372 D. Steel E. McKay Company F. Marmon- Perrin-Gton Co.	A. 1/2" B. Hard Homo. C. 8061 D. .0245-.022P E. .010R-.020O F. .070T G. .24C H. Face 340 I. Back 345 J. E.C.C.H. K. 1650°F 40 min L. water M. 94°C 1 hr N. 10 min. O. Surface P. Lime Q. DC-FeV	A. A II B. .106-.11C C. .0245-.022P D. .010R-.020O E. .070T F. .24C G. Face 340 H. Back 345 I. E.C.C.H. J. 1650°F 40 min K. water L. 94°C 1 hr M. 10 min. N. Surface O. Lime Q. DC-FeV	A. COPPER B. 1/4" C. Grinding	A. 60° SW B. 3/16" C. Grinding	A. 1. 3/16" 1a 175 - B. 1. 1/4" 1a 220 - C. 1. 1/4" 1a 220 - D. Seal bead- 3/16" 1a 226 - E. 5 hours. 200°-240° F. Grinding time not given.	A. N/A B. None	1 251012 2 2510	U U 2 3/16" L 3 3/16" TMP	1 213° 1 213° P	Weld is sound.	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINING DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS		REMARKS OR CRACKING	
					A. BACKING	B. POSITION	C. LOCATION OF R.	D. CRACKING
A. Firing Room No. B. Date of Test C. Plate No. D. Armor Manufacturer E. Electrical Arc F. Armor Fabricator	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. IRON E. PROCESS F. ALAT TREATMENT STEP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. COERCIVE & POLARITY	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	PAREN B. DEPOSITION RATE IN. NO. TYPE AMP. V. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	F. L.L. P.L. C. B.	L.L. P.L. C. B.	LOC. TYPE AWT	RADIOGRAPHIC RESULTS
A. AD 720 B. 7/1/43 C. 4370 D. Great Lakes E. Steel Corp. F. Marmon- Herrington Co.	A. 1/2" B. Hard Homo. .0225 .016P .03CR .25Mo .072r C. .27C D. Face 363 Back 363 E. B.C.H. F. 1650F 40 min water 5 min 940F 1 hr.	A. 45° SV B. 1/4" C. Grinding 4.15In .428-.475I .012-.021S .025P 16.56- 19.06Cr 9.76- 9.86N1 B. Armorloy A-5 C. Lime D. DC-REV	A. Not Given B. Hard Homo. .22In .78S1 .022S .019P .08Cr .20Mo .082r C. Face 363 Back 376 E. B.C.H. F. 1650F 40 min water 5 min 940F 1 hr. 10 mins	PAREN B. None 1. 1 3/16" 1a 150 - 2. 1 3/16" 1a 150 - 3. 1 1/4" 1a 220 - Seal bead- 3/16" 1a 150 - C. 5 hours 55 minutes 290-300F D. Grinding time 15 minutes.	A. 250° F B. None	1 2517 2 2510 3 2521 4 2391	2 1/8" D X 3/4" D X 3/4" D 7 1/2" U	4" IMP I 4" IMP I 2 1/2" IMP I 1 1/4" IMP I 4 1/2" IMP I
A. AD 883 B. 9/20/43 C. 4374 D. Great Lakes E. Steel Corp. F. Marmon- Herrington Co.	A. 1/2" B. Hard Homo. .022S .019P .08Cr .20Mo .082r C. .26C D. Face 363 Back 376 E. B.C.H. F. 1650F 40 min water 5 min 940F 1 hr.	A. 45° SV B. 1/4" C. Grinding A-5 C. Lime D. DC-REV	A. Not Given B. Hard Homo. .22In .78S1 .022S .019P .08Cr .20Mo .082r C. Face 363 Back 376 E. B.C.H. F. 1650F 40 min water 5 min 940F 1 hr. 10 mins	PAREN B. None 1. 1 1/4" 1a 270 - 2. 1 1/4" 1a 270 - 3. 1 3/16" 1a 195 - Seal bead- 3/16" 1a 195 - C. 8 hours 30 mins 320-350F D. Grinding time 1 hour 30 mins.	A. 250° F B. None	1 2498 2 2514	3 1/8" R 8" D 2 1/4" L	9" IMP I 9" IMP I 9" IMP I 9" P Small amount of slag.
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IDENTIFICATION	ABOVE DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	BALLISTIC RESULTS				REMARKS ON CRACKING				
						A. GROOVE, INCLUDED ANGLE	B. ROOT GAP	C. PLATE PREPARATION	D. DEPOSITION SIZE EL. NO. TYPE AMP. V.	E. LOCATION OF R. LOC. TYPE AMT	F/S	L.I.	B.L.	C. B.
A. PISIN ACROSS NO. B. DATE OF TEST C. PLATE NO. D. ALUMA MANUFACTURER E. ELECTRODE USED F. ALUMA FABRICATOR G. SEAT TREATMENT H. TEMP. TIME QUENCH	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. SAW E. PROCESSES F. SEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. CURRENT A POLARITY	A. GROOVE, INCLUDED ANGLE B. ROOT GAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V.										
A. AD 730 B. 7/8/43 C. TH 201 D. Jones & Laughlin E. Alloy Rods F. Terndt Mfg. Division	A. 1/2" B. R III 1.64 Mn .16S1 .0175 .018P .29Mo .28C D. Face 343 Back 352 E. 0.07" max. F. 1650 F 4 hr. water 850 F 1/2 hr. air	A. 60° DV B. 1/4" C. Grinding Flame cutting	A. Copper B. None	A. None B. None	A. 2690 1" L B. IMP D C. IMP V	10 ⁵ ₆ " 2 ² ₁ " 1" R 3 ⁵ ₆ " U	10 ⁵ ₆ " 5" U 6 ¹ ₂ " R 3 ⁵ ₆ " U	D U D U	IMP I IMP - IMP I IMP 0	3 ¹ ₂ " 9 ¹ ₂ " 14 ¹ ₂ " 9" I	P - - V	Scattered through- out legs.		
A. AD 731 B. 7/8/43 C. TH 200 D. Jones & Laughlin E. McKay Company F. Terndt Mfg. Division	A. 1/2" B. R III 1.64 Mn .16S1 .0175 .018P .29Mo .28C D. Face 359 Back 341 E. B.O.H. F. 1650 F 4 hr. water 850 F 1/2 hr air	A. 60° DV B. 1/4" C. Flame cutting Grinding	A. Copper B. None	A. None B. None	A. 2631 1" X B. IMP D C. IMP V	9 ¹ ₂ " 6" U 6 ¹ ₂ " R	9 ¹ ₂ " 0" O 6 ¹ ₂ " R	D U D	IMP I IMP 0 IMP V	11 ¹ ₂ " 1" I 4 ¹ ₂ "	P - -	Small fine crater cracks.		

IDENTIFICATION	ARROW DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS			REMARKS ON CRACKING			
					A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. NO. TYPE ARP. V.	E. ROOT TYPE	F. BODY TYPE	G. CROWN TYPE
A. FABRIC NUMBER B. 7/8.9/43 C. 200 D. ALLOY KODS E. ELECTRODE IMPA F. ARROW FABRICATOR	A. 1/2" B. 1.111 C. .644 in. D. .0175-.018P E. .29Mo F. Jones & G. Laughlin H. McMay Company I. Temstect J. Mfg. Div.	A. .000 EV B. .14-.15C C. .01-.02P D. .26C E. Face 354 F. Back 356 G. P.C.B. H. 1650F 3 hr. I. water J. 850F 12 hr. K. air L. lime + Mn M. TC+EV	A. GROOVE ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION	1. 77 5/36" 2A 120-140 2. 8 3" 3/16" 2A 145-190 3. 7 hours 750-1000 4. Grinding time none.	1. 2529 R 2. 2522 R	1 1/2" 1/2" 5/8"	1. IMP I 4 1/8" P 2. IMP I 2" 1/8" O 3. IMP I 5/8" 3/8" V 4. IMP I 5/8" 3/8" V	1/4" crack in crossbar.		
A. AD 731 B. 7/8.9/43 C. 200 D. ALLOY KODS E. ELECTRODE IMPA F. ARROW FABRICATOR	A. 1/2" B. 1.111 C. .644 in. D. .0175-.018P E. .29Mo F. Jones & G. Laughlin H. McMay Company I. Temstect J. Mfg. Div.	A. .000 EV B. .14-.15C C. .01-.02P D. .26C E. Face 354 F. Back 345 G. P.C.B. H. 1650F 3 hr. I. water J. 850F 12 hr. K. air L. lime + Mn M. TC+EV	A. GROOVE ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	1. 77 5/36" 2A 120-140 2. 8 3" 3/16" 2A 145-190 3. 7 hours 750-1000 4. Grinding time none.	1. 2529 R 2. 2538 R	1 1/2" 10 1/2" 5/8"	1. IMP I 15" P 2. IMP I 12 1/2" V 3. IMP V 30 1/2"	Small amount of slag and porosity.			
A. AD 731 B. 7/8.9/43 C. 200 D. ALLOY KODS E. Temstect F. Mfg. Div.	A. 1/2" B. 1.111 C. .644 in. D. .0175-.018P E. .29Mo F. Face 354 G. Back 345 H. P.O.H. I. 1650F 3 hr. J. water K. 850F 12 hr. L. air M. lime + Mn N. TC+EV	A. .000 EV B. .14-.15C C. .01-.02P D. .26C E. Face 354 F. Back 345 G. P.O.H. H. 1650F 3 hr. I. water J. 850F 12 hr. K. air L. lime + Mn M. TC+EV	A. GROOVE ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	1. 77 5/36" 2A 120-140 2. 8 3" 3/16" 2A 145-190 3. 7 hours 750-1000 4. Grinding time none.	1. 2521 R 2. 2538 R	1 1/2" 10 1/2" 5/8"	1. IMP I 15" P 2. IMP I 12 1/2" V 3. IMP V 30 1/2"				

IDENTIFICATION	ADDITIONAL DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	BALLISTIC RESULTS				RADAROGRAPHIC RESULTS, ETC.			
					A. GROOVE, INCLINED ANGLE, ROOT FACE	B. BACKING	C. PLATE PREPARATION	D. DEPOSITION SIZE EL. NO. TYPE AMP. V.	E. POST	F. LOC.	G. CRACKING	H. CRACKING
A. RISING SUNS NO. B. DATE OF TEST C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRODE MAN. F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. MM E. PROCESS F. BEAT TREATMENT G. TEMP. TIME OF TEST	A. TYPE B. THICKNESS C. CARBON CONTENT D. CEMENT & POLARITY	A. GROOVE, INCLINED ANGLE, ROOT FACE B. BACKING C. PLATE PREPARATION D. DEPOSITION SIZE EL. NO. TYPE AMP. V. E. POST F. TOTAL WELDING TIME & WATER PASS TEMPERATURE G. ASSESSED	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. PLATE PREPARATION D. DEPOSITION SIZE EL. NO. TYPE AMP. V.	A. .14C .025S .005P .20Mo .2EC Face 352 Back 347 B. O.H. 1650 F 1 hr. water 5 850 F 1 hr. air	A. .14C DV B. 1/4" DV C. Flame cutting Grinding	1. II 5/32" 2A 120-135 2. & 3. I 3/16" 2A 165-170 25-27 C. 7 hours. 70°-120°F D. Grinding time none.	1. II 5/32" 2A 120-135 2. & 3. I 3/16" 2A 165-170 25-27 C. 7 hours. 70°-120°F D. Grinding time none.	1. 2536 2. 2538	1/8" L 1/8" R	5" D 4" U IMP I IMP V	P Scattered slag and lack of fusion in legs.
A. AD 731 B. 7/6/43 C. 204 D. Jones & Laughlin E. Allor Rods F. Terrested Mfg. Division	A. 1/2" B. R IIII 1.64Mn .16S1 .0173 .016P .29Mo .2EC Face 352 Back 347 B. O.H. 1650 F 1 hr. water 5 850 F 1 hr. air	A. A. II .14C .025S .005P 3.5- 4.0% 18-0- 19.5Cr .7831 8.25- 10.25Ni Tr. Mo	A. COO DV B. 1/4" DV C. Flame cutting Grinding	A. Copper B. None	1. II 5/32" 2A 120-135 2. & 3. I 3/16" 2A 165-170 25-27 C. 7 hours. 70°-120°F D. Grinding time none.	1. II 5/32" 2A 120-135 2. & 3. I 3/16" 2A 165-170 25-27 C. 7 hours. 70°-120°F D. Grinding time none.	1. 2536 2. 2538	1/8" L 1/8" R	5" D 4" U IMP I IMP V	P Scattered slag and lack of fusion in legs.		
A. AD 731 B. 7/6/43 C. 206 D. Jones & Laughlin E. Hollup Corp. F. Terrested Mfg. Division	A. 1/2" B. R IIII 1.64Mn .16S1 .0173 .016P .29Mo .2EC Face 352 Back 347 B. O.H. 1650 F 1 hr. water 5 850 F 1 hr. air	A. A. I .14C .025S .005P 4.24Mn 19.76Cr	A. COO DV B. 1/4" DV C. Flame cutting Grinding	A. Copper B. None	1. II 5/32" 2A 100-110 15-17 2. & 3. I 3/16" 2A 165 20 C. 8 hours. 70°-140°F D. Grinding time none.	1. II 5/32" 2A 100-110 15-17 2. & 3. I 3/16" 2A 165 20 C. 8 hours. 70°-140°F D. Grinding time none.	1. 2531 2. 2400	1/8" L 1/8" R	5" D 5" U IMP I IMP V	P Scattered slag in crossbar.		

IDENTIFICATION	ARCER DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS				REMARKS ON CRACKING				
					A. PLATE THICKNESS	B. TYPE	C. COATING	D. ANGLE, ROOT FACE	E. DEPOSITION SIZE EL.	F. NO. TYPE AMP. V.	I. RADIOGRAPHIC RESULTS, ETC.		
A. TIDING ARCEC No. B. DATE OF TEST C. PLATE NO. D. ARCER MANUFACTURER E. ELECTRODE AMP. F. ARCER FABRICATOR	A. PLATE THICKNESS B. TRADE NAME C. CARBON CONTENT D. SW E. PROCESS F. SALT TREATMENT TEMP. TIME QUENCH	A. CROOVS, INCLINED B. ANGLE, ROOT FACE C. ROOT CAP D. CUBALYT A POLARITY	A. BACKING B. DEPOSITION SIZE EL. C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. C. PLATE PREPARATION D. REHEATED	A. .14-.16C .01-.0186 .0178-.018P .29Mo .26C Face 369 Back 341 B.O.H. 1650F 1 hr. water 860F 1 hr hours air	B. 1/4" DV Flame cutting Grinding	C. .01-.02P 4.0-.20% 19.2- 19.9CT .32-.33S1 9.59-10.2 .02-.48Mo B. Armoroy A-6 C. Lime D. DC-REV	D. .14-.15C .02-.03S .01P .26Mo .26C Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	E. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	F. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 7 hours, 70°-100°F D. Grinding time none.	G. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 7 hours, 70°-100°F D. Grinding time none.	H. 2408 ft R 5" U 81" D 1050 ft R 41" R 1101 ft R 24" U IMP V 52" U 284" U	I. 1 1/4" P Small fine crater cracks
A. AD 731 B. 7/8-9/43 C. 206. D. Jones & Laughlin E. McRae Company F. Ternestedt Mfg. Division	A. 1/2" B. R III 1.64M .16S1 .0178 .018P .29Mo .26C Face 369 Back 341 B.O.H. 1650F 1 hr. water 860F 1 hr hours air	A. 60° DV Flame cutting Grinding	A. COOPER B. N/A C. N/A	A. None B. None	A. .14-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	B. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	C. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	D. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	E. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	F. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 8 hours, 85°-120°F D. Grinding time 15 minutes.	G. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 8 hours, 85°-120°F D. Grinding time 10 minutes.	H. 2531 X 91/2" D 5" U 81" D 1050 ft R 41" R 1101 ft R 24" U IMP V 52" U 284" U	I. 1 1/4" P Small fine crater cracks
A. AD 870 B. 9/7/43 C. 207. D. Jones & Laughlin E. Page Steel & Wire F. Ternestedt Mfg. Division	A. 1/2" B. R III 1.65M .26S1 .0185 .018P .26Mo .26C Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	A. 60° DV Flame cutting Grinding	A. COOPER B. N/A C. N/A	A. None B. None	A. .14-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	B. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	C. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	D. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	E. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 341 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	F. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 8 hours, 85°-120°F D. Grinding time 10 minutes.	G. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 8 hours, 85°-120°F D. Grinding time 10 minutes.	H. 2523 X R U 71/2" D 1050 ft R 41" L 1101 ft R 24" U IMP V 52" U 284" U	I. 1 1/4" P 3/8" incomplete fusion and slag.
A. AD 870 B. 9/7/43 C. 208. D. Jones & Laughlin E. Page Steel & Wire F. Ternestedt Mfg. Division	A. 1/2" B. R III 1.65M .26S1 .0185 .018P .26Mo .26C Face 337 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	A. 60° DV Flame cutting Grinding	A. COOPER B. N/A C. N/A	A. None B. None	A. .14-.15C .02-.03S .01P 3.54- 3.74Mo Face 337 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	B. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 337 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	C. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 337 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	D. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 337 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	E. .13-.15C .02-.03S .01P 3.54- 3.74Mo Face 337 Back 341 B.O.H. 1600F 1 hr water 760F 1 hr air	F. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 8 hours, 85°-120°F D. Grinding time 10 minutes.	G. 1. II 5/32" 2a 2. & 3. 1/16" 2a 3. 1/16" 2a C. 8 hours, 85°-120°F D. Grinding time 10 minutes.	H. 2523 X R U 71/2" D 1050 ft R 41" L 1101 ft R 24" U IMP V 52" U 284" U	I. 1 1/4" P 3/8" incomplete fusion and slag.

IDENTIFICATION	ARROW DATA	ELECTRODE DATA		JOINT DESIGN		WELDING	PROCEDURE	HEAT		BALLISTIC RESULTS		REMARKS ON CRACKING							
		A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. COATING	E. POLARITY	F. CURRENT A	G. BACKING	H. INCLUDED ANGLE, ROOT FACE	I. DEPOSITION SIZE EL. NO.	J. TYPE AMP. V.	K. LOCATION OF H. PASSES	L. LOC. C. B. TIPS ANT.	M. PLATE PREPARATION	N. ROOT GAP	O. MOOT TYPE	P. GROW TYPE	Q. TOTAL WELDING TIME & INTER PASS TEMPERATURE	R. REGRIND
A. AD 925 B. 10/9/43 C. L 61	D. Republic Steel E. Harnischreger F. Buick Motor Division	A. 3/8"	B. R. I.	C. .01Mn .57% .016S .014P .25Cr .48Ni .11Mo .33C D. Face 352 Back 352 E. B.O.H. F. 1650 F 2 hrs water 860 F 3 hrs. air	A. A : B. 1/4" C. .24S1 .012S .021P .19.41Cr D. AW 3-C E. AW 3-C F. DC-REV	A. .00° DV B. 1/4" C. Flame cutting	A. 1. 2; 3. B. 1 1/4" C. 26.75 minutes 75°-100°F D. Grinding time 7 minutes.	A. PRE B. POST	# #/s	L.L. R.R. C.B.	LOC. C. B. TIPS ANT.								
A. AD 925 B. 10/9/43 C. L 62	D. Republic Steel E. Harnischreger F. Buick Motor Division	A. 3/8"	B. R. I.	C. .022M .48% .016S .012P .26Cr .50Ni .12Mo .33C D. Face 352 Back 352 E. B.O.H. F. 1650 F 2 hrs water 860 F 3 hrs. air	A. A : B. 1/4" C. .24S1 .012S .021P .19.41Cr D. AW 3-C E. AW 3-C F. DC-REV	A. .00° DV B. 1/4" C. Flame cutting	A. 1. 2; 3. B. 1 1/4" C. 29.67 minutes. 80°-115°F D. Grinding time 61 min.	A. None B. None	1 2	2033 2036	4 1/2" L 5" U	3 1/2" D 5" U	- -	- -	- -	- -	- -	P P	
A. A 12860 B. 3/13/44 C. F 60	D. Republic Steel E. Crucible Steel Co. F. Buick Motor Division	A. 3/8"	B. R. I.	C. .00Mn .24S1 .022S .014P .46Cr .42Ni .13Mo .33C D. Face 388 Back 388 E. B.O.H. F. 1650 F 2 hrs water 860 F 3 hrs. air	A. A : B. 3/16" C. Flame cutting	A. 1. 1 5/32" B. 1 1/4" C. 54 hours. 70°-140°F D. Grinding time 1 hour	A. None B. None	6 7	2019 2018	1 1/2" L 2" R	20" D 7 1/2" D	20" U IMP	1 1/2" U IMP	1 1/2" V IMP	1 1/2" V IMP	1 1/2" V IMP	1 1/2" V IMP	P P	

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA		JOINT SIZE FOR		WELDING		PROCEDURE		SEAT		BALLISTIC RESULTS		EFFECTS ON CRACKING		RADIOTRACIC RESULTS, ETC.	
		A. PLATE THICKNESS	B. TYPE	C. COATING	D. DEPOSITION SIZE EL.	E. NO. TYPE AMP. T.	F. PLATE PREPARATION	G. ROOT CAP	H. BACKING	I. ANGLE	J. ROOT CAP	K. LOCATION OF H.	L. L.I.	M. R.L.	N. C. B.	O. LOC.	P. TYPE
A. AD 400 B. 4/21/43 C. 4 D. Youngstown Sheet & Tube Company E. Lincoln Elec. F. Deere & Co.	A. 3/8" B. R 111 C. 1.54 Mn .2061 D. .025 .015P E. .03Cr .30Mo F. .23C G. Face 351-352 H. Back 351-352 I. B.O.H. J. 1625 F 14 hr D. K. water L. 960 F 14 hr. M. air	A. A. I B. .11C C. .048Mn D. .016P E. .00Cr .30Mo F. .22C G. Face 351-352 H. Back 351-352 I. B.O.H. J. 1625 F 14 hr D. K. water L. 960 F 14 hr. M. air	A. 45° SV B. 3/16" C. Machined	A. groove, included angle .15/32" 1a 145 24 B. 1. 1 5/32" 1a 145 24 C. 2. & 3. 1 1/4" 1a 210 28 Seal bead- 3/16" 1a 180 26 C. 3 hours. 80°-170°F D. Grinding time 1 1/4 hours only to clean slag and spatter.	A. None B. None	1 2100 X 2 2100	6° U 1 1/4" R 2 1/4" R	U D IMP U IMP	U D IMP U IMP	U D IMP	U D IMP	U D IMP	U D IMP	U D IMP	U D IMP	U D IMP	P
A. AD 400 B. 4/21/43 C. 4 D. Youngstown Sheet & Tube Company E. Crucible Steel Co. F. Deere & Co.	A. 3/8" B. R 111 C. 1.54 Mn .2061 D. .025 .015P E. .03Cr .30Mo F. .23C G. Face 351-352 H. Back 351-352 I. B.O.H. J. 1625 F 14 hr D. K. water L. 960 F 14 hr. M. air	A. A. I B. .11C C. .048Mn D. .016P E. .00Cr .30Mo F. .22C G. Face 351-352 H. Back 351-352 I. B.O.H. J. 1625 F 14 hr D. K. water L. 960 F 14 hr. M. air	A. 45° SV B. 3/16" C. Machined	A. groove, included angle .15/32" 1a 145 24 B. 1. 1 5/32" 1a 210 28 C. 2. & 3. 1 1/4" 1a 210 28 Seal bead- 3/16" 1a 180 26 C. 4 hours. 80°-170°F D. Grinding time 1 1/4 hours only to clean slag and spatter.	A. None B. None	1 2100 X 2 2100	6° U 3/8" L 1" R	U D U	U D U	U D U	U D U	U D U	U D U	U D U	P		
A. AD 712 B. 6/26/43 C. 7 D. Jones & Laughlin Steel Company E. Arcos Corp. F. Deere & Co.	A. 3/8" B. R 111 C. 1.72Mn .26S1 D. .016S .016P E. .40Mo F. .28C G. Face 341 H. Back 353 I. B.O.H. J. 1660 F 14 hr C. K. water L. 865 F 2 hrs. M. air	A. A. I B. .10C C. 3.54Mn D. .34S1 E. 18.7C F. .54Mo G. Arcos H. Chromate I. DC-REV J. DC-REV K. air	A. 45° SV B. 3/16" C. Machined	A. groove, included angle .15/32" 1a 120 26 B. 1. 1 5/32" 1a 210 29 C. 2. & 3. 1 1/4" 1a 210 29 Seal bead- 3/16" 1a 180 27 C. 3 hours. 80°-170°F D. Grinding time 3 hours.	A. None B. None	1 2012 2 2002 3 2110	6° U 4" R 1 1/4" R	U D U	U D U	U D U	U D U	U D U	U D U	U D U	P		

IDENTIFICATION	Date 1474	ELECTRODE MATERIAL	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS				REMARKS OR CRACKING ANALOGRAFIC RESULTS, ETC.			
					A. BACKING	B. PLATE	C. LOCATION	D. CRACKING	E. PLATE	F. PLATE	G. LOC.	H. TYP. ANT.
					PASSED				NO. TYPE AMP. V.			
A. PLATE THICKNESS	A. TYPE	A. GROOVE, INCLUDED ANGLE, ROOT FACE	B. TRADE NAME	B. DEPOSITION SIZE EL. NO. TYPE AMP. V.								
B. DATE OF TEST	B. TYPE	C. GROOVING	D. CARBON CONTENT	1. ROOT TYPE								
C. PLATE NO.	C. CARBON	D. GROOVING	E. CERAMIC A	2. BODY TYPE								
D. ARMCO MANUFACTURER	D. IRON	E. GROOVING	F. CERAMIC B	3. GROOVING								
E. ELECTRODE MANU.	E. IRON	F. GROOVING	G. POLARITY	4. TOTAL WELDING TIME & INTER PASS TEMPERATURE								
F. ARMCO FABRICATED	F. IRON	G. GROOVING	H. POLARITY	I. SEPARATION								
J. TEST TIME	K. TEST TIME	L. TEST TIME	M. TEST TIME	N. TEST TIME	O. TEST TIME	P. TEST TIME	Q. TEST TIME	R. TEST TIME	S. TEST TIME	T. TEST TIME	U. TEST TIME	V. TEST TIME
A. AD 776	A. 3/8"	A. A 1	A. 45° SV	A. Copper	A. None	1	2427	2 ¹ " L	4 ¹ " U	IMP	I	264
B. 9/3/48	B. R III J&L	.14C	B. 3/16"	B. None	B. None							
C. 11	C. 1.72Mn .26Si	.36Mn	C. Machined	1. I 5/32"	1a	145	26					
D. Jones & Laughlin	D. .016S .016P	.31S1		2. 4 3.	1	1/4"	1a	230	30			
Youngstown Sheet & Tube Co.	E. .43Mn	.20OCR		Seal bead-								
F. Crucible Steel Co.	F. .28C	.28Ni		3/16"	1a	180	28					
G. Deere & Co.	H. .63Mo	.63Mo		3/16"	2	2013	2 ¹ " L	3 ¹ " D	-	-		264
I. 3/8"	J. 1.72Mn .26Si	K. .31S1	L. 1.72Mn .26Si	M. Seal bead-3/16"	N. 2 hours 90°-170°F	O. Grinding time 4 hours.	P.					
J. 9/3/48	K. .014P	L. .014P	M. .014P	N. 3/16"	O. 2 hours 90°-170°F	P. Grinding time 4 hours.	Q. 3/16"	R. 3/16"	S. 3/16"	T. 3/16"	U. 3/16"	V. 3/16"
K. 11/16/43	L. .024S	M. .024S	N. .024S	O. 1/4"	P. 1/4"	Q. 1/4"	R. 1/4"	S. 1/4"	T. 1/4"	U. 1/4"	V. 1/4"	W. 1/4"
L. 13	M. .03Cr	N. .03Cr	O. .03Cr	P. 1/4"	Q. 1/4"	R. 1/4"	S. 1/4"	T. 1/4"	U. 1/4"	V. 1/4"	W. 1/4"	X. 1/4"
M. James A. Laughlin	N. .26C	O. .26C	P. .26C	Seal bead-3/16"	2 hours 90°-170°F	Grinding time 4 hours.	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"
N. Youngstown Sheet & Tube Co.	O. .26C	P. .26C	Q. .26C	3/16"	2 hours 90°-170°F	Grinding time 4 hours.	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
O. Crucible Steel Co.	P. .012P	Q. .012P	R. .012P	S. Seal bead-3/16"	T. 2 hours 90°-170°F	Grinding time 4 hours.	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
P. Deere & Co.	Q. 1.650F	R. 1.650F	S. 1.650F	T. 1.650F	U. 1.650F	V. 1.650F	W. 1.650F	X. 1.650F	Y. 1.650F	Z. 1.650F	A. 1.650F	B. 1.650F
Q. 11/16/43	R. 1.72Mn .26Si	S. 1.72Mn .26Si	T. 1.72Mn .26Si	U. 1.72Mn .26Si	V. 1.72Mn .26Si	W. 1.72Mn .26Si	X. 1.72Mn .26Si	Y. 1.72Mn .26Si	Z. 1.72Mn .26Si	A. 1.72Mn .26Si	B. 1.72Mn .26Si	C. 1.72Mn .26Si
R. 13	S. .019S	T. .019S	U. .019S	V. .019S	W. .019S	X. .019S	Y. .019S	Z. .019S	A. .019S	B. .019S	C. .019S	D. .019S
S. James A. Laughlin	T. .32Mo	U. .32Mo	V. .32Mo	W. .32Mo	X. .32Mo	Y. .32Mo	Z. .32Mo	A. .32Mo	B. .32Mo	C. .32Mo	D. .32Mo	E. .32Mo
T. Youngstown Sheet & Tube Co.	U. .932N1	V. .932N1	W. .932N1	X. .932N1	Y. .932N1	Z. .932N1	A. .932N1	B. .932N1	C. .932N1	D. .932N1	E. .932N1	F. .932N1
U. Crucible Steel Co.	V. .73Mo	W. .73Mo	X. .73Mo	Y. .73Mo	Z. .73Mo	A. .73Mo	B. .73Mo	C. .73Mo	D. .73Mo	E. .73Mo	F. .73Mo	G. .73Mo
V. Deere & Co.	W. .014H	X. .014H	Y. .014H	Z. .014H	A. .014H	B. .014H	C. .014H	D. .014H	E. .014H	F. .014H	G. .014H	H. .014H
W. 11/16/43	X. 1.600F	Y. 1.600F	Z. 1.600F	A. 1.600F	B. 1.600F	C. 1.600F	D. 1.600F	E. 1.600F	F. 1.600F	G. 1.600F	H. 1.600F	I. 1.600F
X. 13	Y. 776	Z. 776	A. 776	B. 776	C. 776	D. 776	E. 776	F. 776	G. 776	H. 776	I. 776	J. 776
Z. 11/16/43	A. 3/8"	B. R III J&L	C. 1.11C	D. 4.16Mn	E. 3/16"	F. Machined	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si
A. 10/22/11	B. R III J&L	C. 1.43Mn .26Si	D. .012P	E. .31S1	F. .31S1	G. .31S1	H. .31S1	I. .31S1	J. .31S1	K. .31S1	L. .31S1	M. .31S1
B. 11/16/43	C. 1.72Mn .26Si	D. .012P	E. .31S1	F. .31S1	G. .31S1	H. .31S1	I. .31S1	J. .31S1	K. .31S1	L. .31S1	M. .31S1	N. .31S1
C. 13	D. .024S	E. .024S	F. .024S	G. .024S	H. .024S	I. .024S	J. .024S	K. .024S	L. .024S	M. .024S	N. .024S	O. .024S
D. James A. Laughlin	E. .26C	F. .26C	G. .26C	H. .26C	I. .26C	J. .26C	K. .26C	L. .26C	M. .26C	N. .26C	O. .26C	P. .26C
E. Youngstown Sheet & Tube Co.	F. .26C	G. .26C	H. .26C	I. .26C	J. .26C	K. .26C	L. .26C	M. .26C	N. .26C	O. .26C	P. .26C	Q. .26C
F. Crucible Steel Co.	G. .012P	H. .012P	I. .012P	J. .012P	K. .012P	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P
G. Deere & Co.	H. 1.600F	I. 1.600F	J. 1.600F	K. 1.600F	L. 1.600F	M. 1.600F	N. 1.600F	O. 1.600F	P. 1.600F	Q. 1.600F	R. 1.600F	S. 1.600F
H. 11/16/43	I. 776	J. 776	K. 776	L. 776	M. 776	N. 776	O. 776	P. 776	Q. 776	R. 776	S. 776	T. 776
I. 13	J. .012P	K. .012P	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P
J. 11/16/43	K. .012P	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P
K. 13	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P
L. 13	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P
M. 13	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P
N. 13	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P
O. 13	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P
P. 13	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P
Q. 13	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P
R. 13	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P	D. .012P
S. 13	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P	D. .012P	E. .012P
U. 13	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P	D. .012P	E. .012P	F. .012P	G. .012P
V. 13	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P	D. .012P	E. .012P	F. .012P	G. .012P	H. .012P
W. 13	X. .012P	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P	D. .012P	E. .012P	F. .012P	G. .012P	H. .012P	I. .012P
X. 13	Y. .012P	Z. .012P	A. .012P	B. .012P	C. .012P	D. .012P	E. .012P	F. .012P	G. .012P	H. .012P	I. .012P	J. .012P
Z. 13	A. .012P	B. .012P	C. .012P	D. .012P	E. .012P	F. .012P	G. .012P	H. .012P	I. .012P	J. .012P	K. .012P	L. .012P
A. 10/22/11	B. 1.72Mn .26Si	C. 1.72Mn .26Si	D. 1.72Mn .26Si	E. 1.72Mn .26Si	F. 1.72Mn .26Si	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si	M. 1.72Mn .26Si
B. 11/16/43	C. 1.72Mn .26Si	D. 1.72Mn .26Si	E. 1.72Mn .26Si	F. 1.72Mn .26Si	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si	M. 1.72Mn .26Si	N. 1.72Mn .26Si
C. 13	D. 1.72Mn .26Si	E. 1.72Mn .26Si	F. 1.72Mn .26Si	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si	M. 1.72Mn .26Si	N. 1.72Mn .26Si	O. 1.72Mn .26Si
D. James A. Laughlin	E. 1.72Mn .26Si	F. 1.72Mn .26Si	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si	M. 1.72Mn .26Si	N. 1.72Mn .26Si	O. 1.72Mn .26Si	P. 1.72Mn .26Si
E. Youngstown Sheet & Tube Co.	F. 1.72Mn .26Si	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si	M. 1.72Mn .26Si	N. 1.72Mn .26Si	O. 1.72Mn .26Si	P. 1.72Mn .26Si	Q. 1.72Mn .26Si
F. Crucible Steel Co.	G. 1.72Mn .26Si	H. 1.72Mn .26Si	I. 1.72Mn .26Si	J. 1.72Mn .26Si	K. 1.72Mn .26Si	L. 1.72Mn .26Si	M. 1.72Mn .26Si	N. 1.72Mn .26Si	O. 1.72Mn .26Si	P. 1.72Mn .26Si	Q. 1.72Mn .26Si	R. 1.72Mn .26Si
G. Deere & Co.	H. 1.600F	I. 1.600F	J. 1.600F	K. 1.600F	L. 1.600F	M. 1.600F	N. 1.600F	O. 1.600F	P. 1.600F	Q. 1.600F	R. 1.600F	S. 1.600F
H. 11/16/43	I. 776	J. 776	K. 776	L. 776	M. 776	N. 776	O. 776	P. 776	Q. 776	R. 776	S. 776	T. 776
I. 13	J. .012P	K. .012P	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P
J. 13	K. .012P	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P
K. 13	L. .012P	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P
L. 13	M. .012P	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P
M. 13	N. .012P	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P
N. 13	O. .012P	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P
O. 13	P. .012P	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .012P	Z. .012P	A. .012P
P. 13	Q. .012P	R. .012P	S. .012P	T. .012P	U. .012P	V. .012P	W. .012P	X. .012P	Y. .			

IDENTIFICATION	ARMED DATE	ELECTRICAL DATA	POINT POSITION	WELDING	PROCEDURE	BALLISTIC RESULTS			REMARKS ON CHAMFERING			
						A. TYPE	B. INCLINE	C. ANGLE. POINT FACE	D. DEPOSITION SIZE IN. NO. TYPE AMP. V.	E. POINT	F. LOCATION OF S	G. CRACKING
A. PLATE SOURCE NO.												
B. DATE OF TEST												
C. PLATE NO.												
D. ARMOR CHARACTERISTICS												
E. ELECTRODE WIRE												
F. ARMOR FABRICATOR												
A. A 10026 B. 11/16/43 C. 14 D. Jones & Laughlin Youngstown Sheet & Tube Co. E. Arc Corp. F. Deere & Company	A. 5/6 B. R III J&L 1.43% Mn .0045-.014P .28Mo C. .28C D. Pace 341 Back 341 E. B.O. 8% Cr. F. 1600°F 4 hr. water 775°F 2½ hr.	A. A I 1.10C 3.66% .34S1 16.71Cr 9.36Ni .64Mo B. Arcos Chroming C. L1M D. DC-REV	A. 45° SV B. 3/16" C. Machined	PASSAGE 1. ROOT TYPE 2. ROOT TYPE 3. GROUT TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST C. C.B. D. S.L.	L.I. F/A L.I. S.L.	S.L. C.B. LOC.	TYP. ANT.				
A. 3/8"												
B. R IIII TEST												
1.722% .0243 .29Mo .28C												
C. .241												
D. Pace 341												
E. Back 341												
F. 1600°F 4 hr. water 900°F 1 hr. water												

TESTIFICATION	LABOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS			REMARKS OR CRACKING	RADIOGRAPHIC RESULTS, ETC.				
					A. PRE FIRE	B. POST FIRE	# F/S	LOCATION	C. B.	D. TYPE	E. CRACKING		
A. Firing Acces No. B. Date of Test C. Plate No. D. Arms Manufacturer E. Electrode Man. F. Labor Fabricator	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. % E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. CURRENT & POLARITY	A. GROOVE, INCLINED ANGLE, BOOT FACE B. BOOT CAP C. PLATE PREPARATION	A. WICKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. ROOT TYPE D. BODY TYPE E. GROOVE TYPE F. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PASSEUR B. DEPOSITION SIZE EL. NO. TYPE AMP. V.	A. PRE FIRE	B. POST FIRE	F/S	L.L. W.L.	C. B.	D. TYPE	E. CRACKING	
A. AD 460 B. 6/8/43 C. W-157	A. 3/8" B. R II C. 1.27mm .2451 .0265 .001P .020T .00N1 .4010 .270 D. Pace 321 Back 321 E. B.O.H. F. 1650°F 3 hrs. water 5°F 3 hrs. air	A. A II B. .08C C. .2651 .0095 .042P 16.ECR 9.7N1 .59H B. Chromang C. Titania D. DC-REV	A. 45° SV B. 3/16" C. Flame cutting Grinding	A. Copper B. I 5/32" 1a 165 22 2. 4 3. 1/4" 1a 290 22 Seal bead- 3/16" 1a 215 22	A. None B. None	1 2153	2 2046	1 1/2" R	1/2" L	6"	D TMP	I 15"	
A. AD 460 B. 6/8/43 C. W-160	A. 3/8" B. R II C. 1.35mm .2451 .0255 .018P .000T .10N1 .45H D. Pace 323 Back 323 E. B.O.H. F. 1650°F 2 1/2 hrs. water 5°F 4 1/2 hrs. air	A. A I B. .08C C. .2651 .0095 .042P 16.ECR 9.7N1 .59H B. Chromang C. Titania D. DC-REV	A. 45° SV B. 3/16" C. Flame cutting Grinding	A. Copper B. I 5/32" 1a 165 22 2. 4 3. 1/4" 1a 210 22 Seal bead- 3/16" 1a 210 22	A. None B. None	1 2077	2 2131	1 1/2" L	1/2" R	6"	D	-	
A. AD 460 B. 6/8/43 C. W-210	A. 3/8" B. R II C. 1.35mm .3081 .0265 .018P .510P .4290 .270 D. Lincoln Elec. E. Ford Motor Co. F. Ford Motor Co.	A. A II B. .08C C. .3081 .0351 17.GR 10.N1 .06M0 R. AR W 3 C. Lime D. DC-REV water 5°F 4 1/2 hrs. water 5°F 3 hrs. air	A. 45° SV B. 3/16" C. Flame cutting	A. Copper B. I 3/16" 1a 175 29 2. 4 3. 1/4" 1a 175 29 Seal bead- 3/16" 1a 175 29	A. None B. None	1 2008	2 2029	3 1/2" L	1/2" R	5 1/2"	D TMP	I 9"	
A. AD 459 B. 6/8/43 C. W-210	A. 3/8" B. R II C. 1.35mm .3081 .0265 .018P .510P .4290 .270 D. Lincoln Elec. E. Ford Motor Co. F. Ford Motor Co.	A. A II B. .08C C. .3081 .0351 17.GR 10.N1 .06M0 R. AR W 3 C. Lime D. DC-REV water 5°F 4 1/2 hrs. water 5°F 3 hrs. air	A. 45° SV B. 3/16" C. Flame cutting	A. Copper B. I 3/16" 1a 175 29 2. 4 3. 1/4" 1a 175 29 Seal bead- 3/16" 1a 175 29	A. None B. None	1 2008	2 2029	3 1/2" L	1/2" R	5 1/2"	D TMP	I 10 1/2	
								4 2123	X	6"	U	IMP	I 20"
									0	1	12		42"

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	BALLISTIC RESULTS			REMARKS ON CRACKING							
						A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. POLARITY	E. COATING	F. PLATE PREPARATION	G. DEPOSITION SIZE EL.	H. NO. TYPE AMP. V.	I. ROOT TYPE	J. BODY TYPE	K. GROOVE TYPE
A. AD 470 B. 6/17/43 C. W-213	A. 3/8" B. R II C. .32Mn .26Si .020S .021P .5ACT .00N1 .41Mo .27Cr D. Face 341 E. Back 341 F. B.O.H. 1650 F 45 min water 965 F 3 hrs. air	A. A I B. .11C 1.65Mn .07Si 18.4Cr 9.7Ni .73Ni P & H Smootharc Lime DC+EV	A. GROOVE, INCLINED B. V-GROOVE C. FLAME CUTTING	A. SACING B. 1/4" SV C. Flame cutting	1. 1 3/16" 1a 160 25 2. 6 3" 1 1/4" 1a 300 28 Seal beads- 5/32" 1a 155 18 C. 5 hours. 190°-200° F D. Grinding and chipping time 2 hours.	A. None B. None	1 2022 2 20181	R D R	4" R 6" U	5" R 6" U	4" R 6" U	1 13 1/2	P			
A. AD 471 B. 6/17/43 C. SCM4-24	A. 3/8" B. R II C. .38Mn .27Si .020S .021P .5ACT .00N1 .41Mo .26C D. Face 341 E. Back 341 F. B.O.H. 1675 F 45 min water 950 F 1 hr. air	A. A I B. .12C 1.78Mn .19Si 18.48Cr 10.48Ni 2.28M B. Rezistal Armorized #14 C. Titanium D. DC+EV	A. GROOVE, INCLINED B. 3/16"-1/4" Sheared C. Grinding	A. COPPER B. 11 6/32" 2b 130 25 2. 11 3/16" 2b 180 25 3. 11 3/16" 5b 180 25 Four Seal beads- 3/16" 4b 160 25 C. 94 hours. 98°-162° F D. Vertical position of plate Horizontal welding in butt	A. None B. None	1 2013 2 2014	R U L	24" R 5" L	24" R 5" D	24" X 5" D	24" R 6" U	24" R 6" U	P	Weld is sound. Small amount of slag.		
A. AD 702 B. 6/22/43 C. SCM4-25	A. 3/8" B. R II C. 1.38Mn .27Si .020S .021P .55Cr .41Mo .28C D. Face 341 E. Back 341 F. B.O.H. 1675 F 45 min water 950 F 1 hr. air	A. A I B. .12C 1.78Mn .19Si 18.48Cr 10.48Ni 2.28M B. Rezistal Armorized #14 C. Titanium D. DC+EV	A. COPPER B. 1/8"-1/4" Sheared C. Grinding	A. None B. None	1 2098 2 2143	2" L 1 1/4" L	63" U 7 1/2" D	63" U 7 1/2" D	63" U 7 1/2" D	63" U 7 1/2" D	63" U 7 1/2" D	63" U 7 1/2" D	P	Weld is sound. Small amount of porosity.		

JOINT IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	MEAT			WELDING RESULTS			REMARKS ON CRACKING RADIOGRAPHIC RESULTS, ETC.		
						A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. SWI	E. PROCESS	F. HEAT TREATMENT TEMP. TIME QUENCH	G. TRADE NAME	H. INCLUDED ANGLE. ROOT FACE	I. DEPOSITION SIZE EL. NO. TYPE AMP. V.
A. AD 740 B. 7/13/43 C. W 164	A. .3/8" B. R II C. .091C D. Ford Motor Co. E. Arcos Corp. F. Ford Motor Co.	A. A I B. .385In C. .021S D. .024P E. .07N1 F. .30M0 G. .435I H. .19.00CR I. .9-34Ni J. .62Mo K. .27C L. Face 341 M. Back 341 N. B.O.H. O. 1650°F 2 hrs. P. water Q. 985°F 24 hrs. R. air	A. GROOVE, INCLUDED ANGLE. ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. 5/52" C. Flame cutting D. Grinding	1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS									
A. AD 740 B. 7/13/43 C. W 164	A. .3/8" B. R II C. .091C D. Ford Motor Co. E. Arcos Corp. F. Ford Motor Co.	A. A I B. .385In C. .021S D. .024P E. .07N1 F. .30M0 G. .435I H. .19.00CR I. .9-34Ni J. .62Mo K. .28C L. Face 352 M. Back 352 N. B.O.H. O. 1650°F 2 hrs. P. water Q. 985°F 24 hrs. R. air	A. GROOVE, INCLUDED ANGLE. ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. 5/52" C. Flame cutting D. Grinding	1. II 5/52" 2. & 3. I 3/16" C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS									
A. AD 740 B. 7/13/43 C. W 164	A. .3/8" B. R II C. .091C D. Ford Motor Co. E. Arcos Corp. F. Ford Motor Co.	A. A I B. .385In C. .021S D. .024P E. .07N1 F. .30M0 G. .435I H. .19.00CR I. .9-34Ni J. .62Mo K. .28C L. Face 352 M. Back 352 N. B.O.H. O. 1650°F 2 hrs. P. water Q. 985°F 24 hrs. R. air	A. GROOVE, INCLUDED ANGLE. ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. 5/52" C. Flame cutting D. Grinding	1. II 5/52" 2. & 3. I 3/16" C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS									
A. AD 740 B. 7/13/43 C. W 164	A. .3/8" B. R II C. .091C D. Ford Motor Co. E. Arcos Corp. F. Ford Motor Co.	A. A I B. .385In C. .021S D. .024P E. .07N1 F. .30M0 G. .435I H. .19.00CR I. .9-34Ni J. .62Mo K. .28C L. Face 352 M. Back 352 N. B.O.H. O. 1650°F 2 hrs. P. water Q. 985°F 24 hrs. R. air	A. GROOVE, INCLUDED ANGLE. ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. 5/52" C. Flame cutting D. Grinding	1. II 5/52" 2. & 3. I 3/16" C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS									
A. AD 740 B. 7/13/43 C. W 164	A. .3/8" B. R II C. .091C D. Ford Motor Co. E. Arcos Corp. F. Ford Motor Co.	A. A I B. .385In C. .021S D. .024P E. .07N1 F. .30M0 G. .435I H. .19.00CR I. .9-34Ni J. .62Mo K. .28C L. Face 352 M. Back 352 N. B.O.H. O. 1650°F 14 hrs. P. water Q. 985°F 24 hrs. R. air	A. GROOVE, INCLUDED ANGLE. ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. 5/52" C. Flame cutting D. Grinding	1. II 5/52" 2. & 3. I 3/16" C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS									
A. AD 747 B. 7/29/43	A. .3/8" B. R II C. .091C D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. A I B. .385In C. .021S D. .024P E. .07N1 F. .30M0 G. .435I H. .19.00CR I. .9-34Ni J. .62Mo K. .28C L. Face 351 M. Back 331 N. B.O.H. O. 1650°F 14 hrs. P. water Q. 985°F 24 hrs. R. air	A. GROOVE, INCLUDED ANGLE. ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING B. 5/52" C. Flame cutting D. Grinding	1. II 5/52" 2. & 3. I 3/16" C. TOTAL WELDING TIME & INTER PASS TEMPERATURE D. REMARKS									

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA	JOINT DESIGN		WELDING PROCEDURE	TEST	BALLISTIC RESULTS				BREAKS ON CRACKING					
			A. GROOVE, INCLUDED ANGLE, ROOT FACE B. TRADE NAME C. CARBON CONTENT D. IRN E. PROCTER F. HEAT TREATMENT TEMP. TIME QUENCH	A. BACKING B. PLATE THICKNESS C. PLATE NO. D. PLATE TYPE E. PLATE PREPARATION F. PLATE POLARITY	A. PLATE THICKNESS B. PLATE TYPE C. PLATE PREPARATION D. PLATE POLARITY		M. PLATE THICKNESS N. PLATE TYPE O. PLATE PREPARATION P. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY	R. PLATE THICKNESS S. PLATE TYPE T. PLATE PREPARATION U. PLATE POLARITY		
A. AD 790 B. 8/17/43 C. 38 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R. II C. 1.33mn .26S1 .019S .020P .50CT .00N1 .32M0 .28C D. Face 341 Back 341 C. Line E. B.O.H. F. 1650 F 14 hr. dbl spray 988 F 24 hrs. air	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.16In .24S1 19.87CT 9.53N1 .82M0 B. Rezistal C. Line	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding	A. 60° SV 4.25In .10C B. 3/16" C. Flame cutting Grinding		
A. AD 871 B. 9/7/43 C. 47C D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R. II C. 1.27mn .26S1 .018S .025P .57CT .11N1 .32M0 .29C D. Face 341 Back 341 E. B.O.H. F. 1650 F 14 hr. spray 985 F 24 hr. air	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	A. 60° SV 4.16In .24S1 19.19CT 8.63N1 .84M0 B. Rezistal C. Titan D. DC-PEV	
A. AD 880 B. 9/14/43 C. W 257 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R. II C. 1.27mn .26S1 .018S .022P .60CT .06N1 .34M0 .0013B C. 29C D. Face 331 Back 331 E. B.O.H. F. 1650 F 14 hr. spray 985 F 24 hr. air	A. 45° SV 4.27In .11C B. 3/16" C. Flame cutting Trimming	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	A. 45° SV 4.27In .11C B. 28S1 19.81CT 9.74N1 .77M0 B. Rezistal C. Titan D. DC-PEV	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT SECTION	WELDING PROCEDURES	BALLISTIC RESULTS			RADIOPHASIC RESULTS, ETC.
					A. TYPE	B. PLATE THICKNESS	C. TRADE NAME	
TESTING RECORD NO.								
A. DATE OF TEST	B. TYPE	C. CARBON CONTENT	D. PLATE NO.	E. PLATES MANUFACTURED	F. ELECTRODE USED.	G. PLATES POLARITY	H. PLATE PREPARATION	I. DEPOSITION SIZE CL. NO. TYPE APP. V.
A. AD 918 B. 10/15/43 C. 76C	D. R II 1.235in .2481 .0198 .016P .0410 .0032B C. .25C D. Face 341 E. Back 341 F. 1650°F 2 hrs SPRY 950°F 2½ hrs air	G. 45° SV 3/16" C. Plane cutting Or fuming	H. ANGLE, ROOT CAP	I. SIGHTING	J. PLATE PREPARATION	K. DEPOSITION SIZE CL. NO. TYPE APP. V.	L. ROOT TYPE	M. CRACK TYPE
TESTING RECORD NO.								
A. AD 918 B. 10/15/43 C. 76C	D. R II 1.235in .2481 .0198 .016P .0410 .0032B C. .25C D. Face 341 E. Back 341 F. 1650°F 2 hrs SPRY 950°F 2½ hrs air	G. 45° SV 3/16" C. Plane cutting Or fuming	H. ANGLE, ROOT CAP	I. SIGHTING	J. PLATE PREPARATION	K. DEPOSITION SIZE CL. NO. TYPE APP. V.	L. ROOT TYPE	M. CRACK TYPE
TESTING RECORD NO.								
A. AD 927 B. 10/12/43 C. SCM4-44	D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	G. 45° SV 4.25in .0206 .021P .53CR .41Mo .26C D. Face 342 Back 342 E. B.O.H. F. 1575°F 4 hr. SPRY 950°F 1 hr. air	H. ANGLE, ROOT CAP	I. SIGHTING	J. PLATE PREPARATION	K. DEPOSITION SIZE CL. NO. TYPE APP. V.	L. ROOT TYPE	M. CRACK TYPE
TESTING RECORD NO.								
A. AD 927 B. 10/12/43 C. SCM4-44	D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	G. 45° SV 4.25in .0206 .021P .53CR .41Mo .26C D. Face 342 Back 342 E. B.O.H. F. 1575°F 4 hr. SPRY 950°F 1 hr. air	H. ANGLE, ROOT CAP	I. SIGHTING	J. PLATE PREPARATION	K. DEPOSITION SIZE CL. NO. TYPE APP. V.	L. ROOT TYPE	M. CRACK TYPE
TESTING RECORD NO.								
A. AD 927 B. 10/12/43 C. SCM4-44	D. Ford Motor Co. E. Mc Kay Company F. Ford Motor Co.	G. 45° SV 4.25in .0206 .021P .53CR .41Mo .26C D. Face 341 Back 341 E. B.O.H. F. 1575°F 45 min spray 950°F 1 hr. air	H. ANGLE, ROOT CAP	I. SIGHTING	J. PLATE PREPARATION	K. DEPOSITION SIZE CL. NO. TYPE APP. V.	L. ROOT TYPE	M. CRACK TYPE
TESTING RECORD NO.								

IDENTIFICATION	ADDED DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			REMARKS ON CRACKING						
							A. TYPE	B. INCLINED ANGLE. ROOT FACE SHOT CAP	C. CARBON CONTENT	D. COLD BEAD & POLARITY	E. TRADE NAME	F. CARTRIDGE	G. NO. TYPE AMP.	H. VEL.	I. LOCATION OF S.	J. CRACKING
A. FISHING AEROSOL NO. B. DATE OF TEST C. PLATE NO. D. ADDED MANUFACTURER E. ELECTRODE AMP F. ADDED FABRICATOR							A. GROOVE. ANGLE. ROOT FACE SHOT CAP	B. DEPOSITION RATE EL. C. PLATE PREPARATION								
A. AD 894 B. 9/20/43 C. SCN4-48 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R. II C. .38Mn .27Si .021P .53Cr .08Ni .41Mo .26C D. Face 352 Back 352 E. B.O.H. F. 1675 F 45 min spray 950 F 1 hr. air	A. A I -11C 4.0ern .26Si 19.84Cr 9.71Ni .88Mo B. Crucible Armored 16-8m C. Titanium D. DC-REV	A. 45° SV B. 1/8-1/4" Sheared Grinding	A. Copper B. 5/32" 3/16" 1/4" C. 5.74Mn .42 19.38Cr 10.28Ni .58Mo B. Raccoloy Arc 16-8 Mn mod E. B.O.H. F. 1675 F 45 min.D. DC-REV	A. None B. None	A. PRE B. POST	V/I A.L. I.L.	A.L. C.B.	LOC.	TYPE	1	121°	P			
A. AD 908 B. 9/30/43 C. SCN4-57	A. 3/8" B. R. II C. .38Mn .27Si .021P .41Mo .26C D. Face 352 Back 352 E. B.O.H. F. 1675 F 45 min.D. DC-REV	A. A I -11C 4.0ern .26Si 19.38Cr 10.28Ni .58Mo B. Raccoloy Arc 16-8 Mn mod C. Lime D. DC-REV	A. 45° SV B. 1/8-1/4" Sheared Grinding	A. Copper B. 5/32" 3/16" 1/4" C. 5.74Mn .42 19.38Cr 10.28Ni .58Mo B. Raccoloy Arc 16-8 Mn mod C. Lime D. DC-REV	A. None B. None	A. PRE B. POST	V/I A.L. I.L.	A.L. C.B.	LOC.	TYPE	1	111°	P			
A. AD 911 B. 9/30/43 C. 74C	A. 3/8" B. R. II C. .23Mn .24Si .0186 .019P .56Cr .06Ni .00138 .26C D. Face 341 Back 341 E. B.O.H. F. 1660 F 2 hrs spray 950 F 24 hrs air	A. A I -065C 3.75Si .54Si 19.08Cr 9.95Ni .97Mo B. Chromang C. Lime D. DC-REV	A. 45° SV B. 3.11" Flame cutting Grinding	A. None B. Flame cutting Grinding	A. None B. None	A. PRE B. POST	X 2	1980 X	1	31°	D	IMP	I	1°	P	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS				RESULTS ON CRACKING			
					A. BACKING	B. ANGLE, BOOT FACE	C. BOOT CAP	D. PLATE PREPARATION	E. ROOT TYPE	F. GROOVE TYPE	G. TOTAL WELDING TIME & INTER PASS TEMPERATURE	L. RADIOGRAPHIC RESULTS, ETC.
A. FIBERGLASS REINFORCED B. DATE OF TEST C. PLATE NO. D. ARMORED MANUFACTURER E. ELECTRODE USED F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TYPE C. PLATE NO. D. ARMORED MANUFACTURER E. PLATE STEEL F. ELECTRODE USED G. ARMOR FABRICATOR	A. 3/8" B. R-11 C. 98C D. Ford Motor Co. E. Page Steel & Wire Co. F. Ford Motor Co.	A. I B. 4.05Mn .100C .061 .56Cr .34Mo .0013B .26C Face 34 Back 34 B.O.H. 1650°F spray 950°F air	A. .00 SV B. 3/16" C. Flame cutting Grinding	A. groove, included angle, boot face B. groove, included angle, boot face C. plate preparation	A. BACKING B. DEPOSITION RATE EL. NO. TYPE AMP. V. 1. Root type 2. Body type 3. Groove type C. Total welding time & inter pass temperature	A. None B. None	A. PRE-HEAT B. POST-HEAT	A. PRE-HEAT B. POST-HEAT	A. LOCATION OF S. L.I. B.L. C.B. LOC. T/A	A. CRACKING B. TYPE AND C. LOC.	
A. AD 10001 B. 10/15/43 C. 98C D. Ford Motor Co. E. Reid-Avery Co. F. Ford Motor Co.	A. 3/8" B. 1.23Mn .019P .60Cr .34Mo .0013B .26C Face 34 Back 34 B.O.H. 1650°F spray 950°F air	A. I B. 4.05Mn C. Racoiloy D. DC-REV	A. .00 SV B. 3/16" C. Flame cutting Grinding	A. groove, included angle, boot face B. groove, included angle, boot face C. plate preparation	A. BACKING B. DEPOSITION RATE EL. NO. TYPE AMP. V. 1. Root type 2. Body type 3. Groove type C. Total welding time & inter pass temperature	A. None B. None	A. PRE-HEAT B. POST-HEAT	A. PRE-HEAT B. POST-HEAT	A. LOCATION OF S. L.I. B.L. C.B. LOC. T/A	A. CRACKING B. TYPE AND C. LOC.		
A. AD 951 B. 10/23/43 C. 98C D. Ford Motor Co. E. Reid-Avery Co. F. Ford Motor Co.	A. 3/8" B. 1.23Mn .019P .60Cr .34Mo .0013B .26C Face 34 Back 34 B.O.H. 1650°F spray 950°F air	A. I B. 4.05Mn C. Racoiloy D. DC-REV	A. .00 SV B. 3/16" C. Flame cutting Grinding	A. groove, included angle, boot face B. groove, included angle, boot face C. plate preparation	A. BACKING B. DEPOSITION RATE EL. NO. TYPE AMP. V. 1. Root type 2. Body type 3. Groove type C. Total welding time & inter pass temperature	A. None B. None	A. PRE-HEAT B. POST-HEAT	A. PRE-HEAT B. POST-HEAT	A. LOCATION OF S. L.I. B.L. C.B. LOC. T/A	A. CRACKING B. TYPE AND C. LOC.		
A. AD 951 B. 10/23/43 C. 98C D. Ford Motor Co. E. Reid-Avery Co. F. Ford Motor Co.	A. 3/8" B. 1.23Mn .019P .60Cr .34Mo .0013B .26C Face 34 Back 34 B.O.H. 1650°F spray 950°F air	A. I B. 4.05Mn C. Racoiloy D. DC-REV	A. .00 SV B. 3/16" C. Flame cutting Grinding	A. groove, included angle, boot face B. groove, included angle, boot face C. plate preparation	A. BACKING B. DEPOSITION RATE EL. NO. TYPE AMP. V. 1. Root type 2. Body type 3. Groove type C. Total welding time & inter pass temperature	A. None B. None	A. PRE-HEAT B. POST-HEAT	A. PRE-HEAT B. POST-HEAT	A. LOCATION OF S. L.I. B.L. C.B. LOC. T/A	A. CRACKING B. TYPE AND C. LOC.		
A. AD 951 B. 10/23/43 C. 98C D. Ford Motor Co. E. Reid-Avery Co. F. Ford Motor Co.	A. 3/8" B. 1.23Mn .019P .60Cr .34Mo .0013B .26C Face 36 Back 36 B.O.H. 1650°F spray 950°F air	A. I B. 4.05Mn C. Racoiloy D. DC-REV	A. .00 SV B. 3/16" C. Flame cutting Grinding	A. groove, included angle, boot face B. groove, included angle, boot face C. plate preparation	A. BACKING B. DEPOSITION RATE EL. NO. TYPE AMP. V. 1. Root type 2. Body type 3. Groove type C. Total welding time & inter pass temperature	A. None B. None	A. PRE-HEAT B. POST-HEAT	A. PRE-HEAT B. POST-HEAT	A. LOCATION OF S. L.I. B.L. C.B. LOC. T/A	A. CRACKING B. TYPE AND C. LOC.		

IDENTIFICATION	ABOVE DATA	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCESSES		TEST		BALLISTIC RESULTS		BREAKS ON CRACKING		BALLOONGRAPHIC RESULTS, ETC.	
		A. PLATE THICKNESS	B. TYPE	C. GROOVE, INCLUDED ANGLE, ROOT FACE	D. CUTTING	E. DEPOSITION SIZE EL. NO. TYPE AMP. V.	F. PASSES	G. DEPOSITION SIZE EL. NO. TYPE AMP. V.	H. CRACKING	I. LOC.	J. TYPE	K. LOC.	L. L.I.	M. C.B.	N. LOC.	O. TYPE	P. LOC.
A. AD 865 B. 11/2/43 C. W 24 D. Ford Motor Co. E. Alloy Tools Co. F. Ford Motor Co.	A. 3/8" B. R II C. 1.32 in. D. .0025 E. .820T F. .31Mo G. .0013B H. .26C I. Face 331 J. Back 331 K. B.O.H. L. 1650 F 14 hr. M. spray N. 906 F 24 hrs. O. air	A. A I B. .11C C. 4.50mm D. .60C1 E. 19.88CT F. 10.2N1 G. .88Mo H. Armorarc I. Lime J. DC-REV	A. 45° SV B. 5/32" SV C. Flame cutting D. Grinding	A. Copper B. 1 C. 5/32" 1a D. 1 E. 5/32" 1a F. 5/32" 2b G. Seal bead- H. 5/32" 1a I. 5/32" 1a J. 5/32" 1a K. 5/32" 1a L. 5/32" 1a M. 5/32" 1a N. 5/32" 1a O. 5/32" 1a P. 5/32" 1a Q. 5/32" 1a R. 5/32" 1a S. 5/32" 1a T. 5/32" 1a U. 5/32" 1a V. 5/32" 1a W. 5/32" 1a X. 5/32" 1a Y. 5/32" 1a Z. 5/32" 1a	A. None B. None	A. 12037 B. 2021 X C. 2027 R D. 2030 L E. 2030 L F. 2030 L G. 2030 L H. 2030 L I. 2040 X J. 2040 X K. 2040 X L. 2040 X M. 2040 X N. 2040 X O. 2040 X P. 2040 X	A. 4 1/2" R B. 6" U C. 6 1/2" D D. -	A. None B. None	A. 12037 B. 2021 X C. 2027 R D. 2030 L E. 2030 L F. 2030 L G. 2030 L H. 2030 L I. 2040 X J. 2040 X K. 2040 X L. 2040 X M. 2040 X N. 2040 X O. 2040 X P. 2040 X	P							
A. AD 865 B. 11/2/43 C. W 265 D. Lincoln Motor Co. E. Lincoln Electric Co. F. Ford Motor Co.	A. 3/8" B. R II C. 1.34 in. D. .0013B E. .01SP F. .50C1 G. .21Mo H. .0013B I. Face 331 J. Back 331 K. B.O.H. L. 1650 F 14 hr. M. spray N. 906 F 24 hrs. O. air	A. A II B. .11C C. 4.00mm D. .6251 E. 20.00CT F. 10.00N1 G. .26C H. Armorarc I. Lime J. DC-REV	A. 45° SV B. 5/32" SV C. Flame cutting D. Grinding	A. Copper B. 1 C. 5/32" 1a D. 1 E. 5/32" 1a F. 5/32" 2b G. Seal bead- H. 5/32" 1a I. 5/32" 1a J. 5/32" 1a K. 5/32" 1a L. 5/32" 1a M. 5/32" 1a N. 5/32" 1a O. 5/32" 1a P. 5/32" 1a Q. 5/32" 1a R. 5/32" 1a S. 5/32" 1a T. 5/32" 1a U. 5/32" 1a V. 5/32" 1a W. 5/32" 1a X. 5/32" 1a Y. 5/32" 1a Z. 5/32" 1a	A. None B. None	A. 12040 B. 2030 L C. 2030 L D. 2030 L E. 2030 L F. 2030 L G. 2030 L H. 2030 L I. 2040 X J. 2040 X K. 2040 X L. 2040 X M. 2040 X N. 2040 X O. 2040 X P. 2040 X	A. 6" D B. 6" U C. 6" U D. 6" U E. 6" U F. 6" U G. 6" U H. 6" U I. 6" D J. 6" U K. 6" U L. 6" U M. 6" U N. 6" U O. 6" U P. 6" U	P									
A. AD 866 B. 11/2/43 C. W 276 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R II C. 1.34 in. D. .01SP E. .060T F. .31Mo G. .0013B H. .26C I. Face 331 J. Back 331 K. B.O.H. L. 1650 F 14 hrs. M. spray N. 906 F 24 hrs. O. air	A. A I B. .15C C. 4.44mm D. .21S1 E. 20.04CT F. 9.54N1 G. .6250 H. Bezdral I. Titanite J. DC-REV	A. 45° SV B. 5/32" SV C. Flame cutting D. Grinding	A. Copper B. 1 C. 3/16" 1a D. 1 E. 1/4" 1a F. 1 G. 1/4" 1a H. Seal bead- I. 1/4" 1a J. 1/4" 1a K. 1/4" 1a L. 1/4" 1a M. 1/4" 1a N. 1/4" 1a O. 1/4" 1a P. 1/4" 1a Q. 1/4" 1a R. 1/4" 1a S. 1/4" 1a T. 1/4" 1a U. 1/4" 1a V. 1/4" 1a W. 1/4" 1a X. 1/4" 1a Y. 1/4" 1a Z. 1/4" 1a	A. None B. None	A. 12020 B. 2004 R C. 1987 L D. 1987 L E. 1987 L F. 1987 L G. 1987 L H. 1987 L I. 1987 L J. 1987 L K. 1987 L L. 1987 L M. 1987 L N. 1987 L O. 1987 L P. 1987 L	A. 6 1/2" R B. 5 1/2" D C. 5" D D. 5" U E. 5" U F. 5" U G. 5" U H. 5" U I. 5" U J. 5" U K. 5" U L. 5" U M. 5" U N. 5" U O. 5" U P. 5" U	P									

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN DATA	WELDING PROCEDURE	BALLISTIC RESULTS			
					HEAT	VSL.	LOCATION OF R.	CRACKING
A. FUSING PROCESS NO. B. PLATE THICKNESS C. DATE OF TEST D. PLATE NO. E. CARBON CONTENT F. IRON G. PROCESS H. ELECTRICAL INPUT I. ARMOR FABRICATOR	A. TYPE B. TRADE NAME C. COATING D. CURRENT E. POLARITY	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION D. PLATE PREPARATION	A. BACKING B. DEPOSITION SITE EL. NO. TYPE APP. V. 1. ROOT TYPE 2. CROWN TYPE 3. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE- B. POST C. T/S	A. PRE- B. POST C. T/S	L.I. B.L. C.B. LOC.	TYPE & WT	RADIOGRAPHIC RESULTS, ETC.
A. AD 393 B. 6/8/43 C. 21 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. A 1 B. R 11 1.350" .2981 .0215 .024P .55CT .07N1 .3040 .27C Face 341 Back 341 B.O.H. 1650F 14 hr. water 56° air 965F 2½ hrs.	A. 80° SV B. 1 1/8" C. Flame cutting Grinding	A. BACKING B. 1 1/8" C. Flame cutting Grinding 3. 1 1/4" Seal bead - 6/32" 1a 155 24	A. None B. None	A. 2100 R 2100 R 2100 L 2100	# U IMP I 13° 4 1/2" D 0 1 2" Small crack in crossbar.	P	
A. AD 393 B. 6/8/43 C. 21 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. A 1 B. R 11 1.350" .2981 .0215 .024P .55CT .07N1 .3040 .27C Face 341 Back 341 B.O.H. 1650F 14 hr. water 56° air 965F 2½ hrs.	A. 80° SV B. 1 1/4" C. Flame cutting Grinding	A. BACKING B. 1 1/4" C. Flame cutting Grinding 3. 1 1/4" Seal bead - 3/16" 1a 160 23	A. None B. None	A. 2100 R 2100 R 2100 L 2100	# U IMP I 13° 4 1/2" D 0 1 1 1/4" 164"	P	
A. AD 393 B. 6/8/43 C. 24 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. A 1 B. R 11 1.350" .2981 .0215 .024P .55CT .07N1 .3040 .27C Face 341 Back 341 B.O.H. 1650F 14 hr. water 56° air 965F 2½ hrs.	A. 80° SV B. 1 1/4" C. Flame cutting Grinding	A. BACKING B. 1 1/4" C. Flame cutting Grinding 3. 1 1/4" Seal bead - 3/16" 1a 160 23	A. None B. None	A. 2100 R 2100 R 2100 L 2100	# U IMP I 13° 4 1/2" D 0 1 1 1/4" 4 1/2" F 1/2" Incomplete fusion.	P	

IDENTIFICATION	ANODE DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	BALLISTIC RESULTS			REMARKS ON CRACKING					
						A. TYPE	B. THICKNESS	C. COATING	D. CURRENT & POLARITY	E. VEL.	F. PRESSION	G. DEPOSITION RATE EL.	H. DEPOSITION RATE APP. V.	I. ROOT TYPE
A. FIDGING NUMBER B. DATE OF TEST C. SGN-4-A D. Anode Manufacturer E. Electronic Apparatus F. Anode Fabricator	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. IRON E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. CARBON CONTENT D. IRON E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. PLATE CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION RATE EL. C. PLATE PREPARATION	PASSES	A. PRE B. POST	E	VEL.	LOCATION OF #	L-L.	R-L.	C-B.	LOC.	TYPE & ANT.
A. AD 450 B. 6/15/43 C. SGN-4-A D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R.I.I. C. 1.33In .275I D. .0205 .021P E. .52Cr .41Mo F. .28C G. Face 341 H. Back 341 I. B.O.H. J. 1575°F 45 min K. water L. 925°F 13 hrs. M. air	A. A 1 B. — C. Rezisal D. Armored E. .14 F. DC-REV	A. 45° SV B. 1/8-1/4" C. Sheared D. Grinding	A. BACKING B. 1. I 6/32" C. 3/16" D. 1 1/4"	1a 120 25 1a 200 25 1a 220 25	A. None B. None	1	2100	45° 21° L U	-	-	P	Slag spot in x-bar.	
A. AD 417 B. 6/11/43 C. 28 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R.I.I. C. 1.33In .305I D. .0225 .022P E. .52Cr F. .08Ni .32Mo G. .28C H. Face 322 I. Back 321 J. 1650°F 13 hrs K. water L. 965°F 21 hrs M. air	A. A 1 B. — C. Rezisal D. Armored E. .14 F. DC-REV	A. 60° SV B. 3/16" C. Flame cutting Grinding	A. BACKING B. 1. I 5/32" C. 3/16" D. 3/16"	1a 105 22 1a 165 23 2b 150 22	A. None B. None	1	2100	45° 13° L U	-	-	P	Welds are sound.	
A. AD 417 B. 6/11/43 C. 29 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R.I.I. C. 1.33In .306I D. .0238 .022P E. .52Cr F. .08Ni .32Mo G. .28C H. Face 321 I. Back 321 J. 1660°F 13 hrs K. water L. 965°F 21 hrs M. air	A. A 1 B. — C. Rezisal D. Armored E. .14 F. DC-REV	A. 60° SV B. 3/16" C. Flame cutting Grinding	A. BACKING B. 1. I 5/32" C. 3/16" D. 3/16"	1a 110 22 1a 185 23 2b 165 23	A. None B. None	1	2100	45° 10° L U	D	IMP	I 18°	Seal bead - C. 4½ hours 80°-180°F D. One edge of groove buttered Grinding time 36 minutes. Back of beads ground out.	
A. AD 417 B. 6/11/43 C. 29 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. 3/8" B. R.I.I. C. 1.33In .306I D. .0238 .022P E. .52Cr F. .08Ni .32Mo G. .28C H. Face 321 I. Back 321 J. 1660°F 13 hrs K. water L. 965°F 21 hrs M. air	A. A 1 B. — C. Rezisal D. Armored E. .14 F. DC-REV	A. 60° SV B. 3/16" C. Flame cutting Grinding	A. BACKING B. 1. I 5/32" C. 3/16" D. 3/16"	1a 110 22 1a 185 23 2b 165 23	A. None B. None	1	2100	45° 4° L U	D	IMP	I 20°	Seal bead - C. 7 hours 35 minutes. D. One edge of grooves buttered. Back of beads ground out.	

IDENTIFICATION	ABOVE DATA	ELECTRODE MPa	JOINT DESIGN	WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			REMARKS ON CRACKING		
							A. PRE B. POST	E.V. F.V.	LOCATION OF R. E.L. D.L. C.B.	CRACKING LOC. TYPE AMT	RADIOGRAPHIC RESULTS ETC	
A. FUSING RECORD NO. B. DATE OF TEST C. PLATE NO. D. ARMS MANUFACTURERS E. ELECTRODE INFO. F. ARMS FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. SIZE E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. CURRENT & POLARITY	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE E.L. NO. TIPZ AND. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. Copper B. 1/8"-1/4" C. Flame cutting Grinding	A. None B. None	2100	1/8" R	U IMP	1 2"	P	
A. AD 366 B. 4/13/43 C. 687E-10-0-A D. Ford Motor Co. E. Crucible Steel Corp. F. Ford Motor Co.	A. 3/8" B. R 11 1.20-1.40Mn .20-.30S1 .04S MAX. .04P MAX. .50-.60Cr .30-.40Mo .26-.30C D. Pace 341 Back 321 E. Elec. Basic F. —	A. 60° SV B. 1/8"-1/4" C. —	B. Bezel Armorized Φ 14 C. DC+REV D. —	B. Root Grinding Seal bead- 1/4"	1. 1 5/32" 1a 140 26 2. 1 3/16" 1a 200 25 3. 1 1/4" 1a 270 25 4. Seal bead- 1/4" 1a 270 25	2 2100 4" L	6"	D	—	—		
A. AD 366 B. 4/13/43 C. 687E-1-6 D. Ford Motor Co. E. Field Avery Co. F. Ford Motor Co.	A. 3/8" B. R 11 1.20-1.40Mn .20-.30S1 .04S MAX. .04P MAX. .50-.60Cr .30-.40Mo .26-.30C D. Pace 311 Back 302 E. Elec. Basic F. —	A. 60° SV B. 1/8"-1/4" C. —	B. Back Shield Arc #18-8A C. DC+REV D. —	C. 4 hours. 70°-100°F D. —	1. 1 5/32" 1a 120 27 2. 1 3/16" 1a 170 25 3. 1 1/4" 1a 220 25 4. Seal bead- 1/4" 1a 220 25	3 2100 2" R	7 1/2"	D	—	—		
A. AD 366 B. 4/13/43 C. 687E-1-6 D. Ford Motor Co. E. Field Avery Co. F. Ford Motor Co.	A. 3/8" B. R 11 1.20-1.40Mn .20-.30S1 .04S MAX. .04P MAX. .50-.60Cr .30-.40Mo .26-.30C D. Pace 311 Back 302 E. Elec. Basic F. —	A. 60° SV B. 1/8"-1/4" C. —	A. Copper B. 1/8"-1/4" C. Flame cutting Grinding	A. None B. None	4. 2100 3 1/2" L	2"	U	—	—	—		
A. AD 366 B. 4/13/43 C. 687E-1-6 D. Ford Motor Co. E. Field Avery Co. F. Ford Motor Co.	A. 3/8" B. R 11 1.20-1.40Mn .20-.30S1 .04S MAX. .04P MAX. .50-.60Cr .30-.40Mo .26-.30C D. Pace 311 Back 302 E. Elec. Basic F. —	A. 60° SV B. 1/8"-1/4" C. —	B. Back Shield Arc #18-8A C. DC+REV D. —	C. 4 hours. 85°-105°F D. —	5 2100 1" L	12 1/2"	D	IMP	1 10"	24"		
						12 1/2" section displaced 12"						

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	TEST	BALLISTIC RESULTS			REMARKS ON CRACKING					
							A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. COATING	E. CURRENT & POLARITY	F. HEAT TREATMENT TEMP. TIME QUENCH	G. DEPOSITION SIZE EL. NO. TYPE AMP. V.	H. PLATE PREPARATION	I. ROOT TYPE
A. A-10920 B. 11/11/43	A. 3/8" B. R 11 C. 1.23In .2951 D. Ford Motor Co. E. Page Steel & Wire Co. F. Ford Motor Co.	A. A 1 B. .100C C. 4.08In D. .022S .010P E. .68CR .06N1 F. .31Mo G. .0013B H. .2RC I. Face 331 Back 331 J. B.O.H. K. 1650F 13 hr. L. SPRAY 965°F 24 hrs. air	A. GROOVE, INCLINED ANGLE, ROOT CAP B. ROOT CAP C. PLATE PREPARATION	A. BACKING B. 6/32" C. Flame cutting Grinding	A. COPPER B. 1. 1 3/16" 1A 165 25 2. 4 3 1/4" 1A 270 25 Seal bead- 3 1/16" 1A 175 25	A. None B. None	1 2050 2 2056	1/8" R U 3" D X 3 1/4" D	- - -	- - -	P				
A. A-10917 B. 11/11/43	A. 3/8" B. R 11 C. 1.23In .2451 D. Ford Motor Co. E. Page Steel & Wire Co. F. Ford Motor Co.	A. A 1 B. .100C C. 4.08In D. .022S .010P E. .68CR .06N1 F. .34Mo G. .0013B H. .2RC I. Face 341 Back 341 J. B.O.H. K. 1650F 13 hr. L. SPRAY 965°F 24 hrs. air	A. GROOVE, INCLINED ANGLE, ROOT CAP B. 5/32" C. Flame cutting Grinding	A. 60° SV B. 3/16" cutting Grinding	A. 1 3/16" 1A 130 25 2. 1 3/16" 1A 190 24 3. 1 1/4" 1A 260 26 Seal bead- 3 1/16" 1A 190 24	A. Yes B. None	1 2089 2 2022	1" R 2" D 3 1/4" R 4 2210	6 1/4" U 2" D 7 1/4" U 2 1/2" R	- - - -	P				
A. A-10917 B. 11/11/43	A. 3/8" B. R 11 C. 1.47In .2451 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. A 1 B. .13C C. 3.75In D. .0681 E. .60CR .06N1 F. .36Mo G. .0013B H. .27C I. Face 361 Back 361 J. B.O.H. K. 1650F 13 hr. L. SPRAY 965°F 24 hrs. air	A. GROOVE, INCLINED ANGLE, ROOT CAP B. 5/32" C. Flame cutting Grinding	A. 90° SV B. 5/32" C. Flame cutting Grinding	A. 1 3/16" 1A 130 25 2. 1 3/16" 1A 180 24 3. 1 1/4" 1A 180-180 24	A. Yes B. None	1 2080 2 2031	1/8" R 1" R 4 1/4" D	7 1/4" U 1" D 4 1/4" D	IMP IMP IMP	1 18 1/2 V 5 1/2 12" 36"				
A. A-10917 B. 11/11/43	A. 3/8" B. R 11 C. 1.47In .2451 D. Ford Motor Co. E. Crucible Steel Co. F. Ford Motor Co.	A. A 1 B. .13C C. 3.75In D. .0681 E. .60CR .06N1 F. .36Mo G. .0013B H. .27C I. Face 361 Back 361 J. B.O.H. K. 1650F 13 hr. L. SPRAY 965°F 24 hrs. air	A. GROOVE, INCLINED ANGLE, ROOT CAP B. 5/32" C. Flame cutting Grinding	A. 90° SV B. 5/32" C. Flame cutting Grinding	A. 1 3/16" 1A 130 25 2. 1 3/16" 1A 180 24 3. 1 1/4" 1A 180-180 24	A. Three seal beads- 3 1/16" 3b 160-170 23-25 C. 12 hours. 95°F-180°F D. Grinding time 2 hrs. 6 mins.	1 2080 2 2031	1/8" R 1" R 4 1/4" D	IMP IMP IMP	1 18 1/2 V 5 1/2 12" 36"					

TESTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING PROCEDURE	BALLISTIC RESULTS				REMARKS ON CRACKING							
					A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. COATING	E. CURRENT	F. POLARITY	G. BACKING	H. DEPOSITION RATE EL. NO. TYPE APP. V.	I. SHOT TYPE	J. BODY TYPE	K. CROWN TYPE	L. TOTAL WELDING TIME & INTER PASS TEMPERATURE
A. 110947 B. 11/22/43 C. SCN 4-13	A. R II B. R II C. .384 in. D. .0206 E. .530 in. F. .240 in. G. .00138 in. H. .00138 in. I. .00138 in. J. .00138 in. K. .00138 in. L. .00138 in.	A. 45° SV B. 3/16"-1/4" C. Sheared. Grinding	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT CAP C. PLATE PREPARATION	A. Copper B. 5/32" 1a 140 25 C. Seal bead- 1/4"	A. None 1 B. None	2055	2 1/2" R	5"	D	-	-	P				
D. Ford Motor Co. E. Arco Corp. F. Ford Motor Co.	A. I B. .2751 .023P .0001 C. .240C D. Pace 341 E. B.O.H. F. 1675°F 45 min spray 925°F 2 hrs. air	.07-.17C 3.30- 4.75in .0061 .038 .04P 18.0- 21.0C 9.0- 10.7H 1.1Cto B. Chromating Form #21CY C. Lime D. DC-REV	1. I 5/32" 1a 200 25 2. I 3/16" 1a 280 25 3. I 1/4" 1a 260 25 C. 7½ hours. 81°F-128°F D. Grinding time 1 hour.	1982	2 1/2" R	3 1/2" U	1 1/4" P	IMP	IMP	V	5 1/2"					
A. 11267 B. 12/9/43 C. W 280	A. 3/8" B. R II C. .40 in. D. .0265 E. .0001 F. .00138	A. 45° SV B. 5/32" C. Flame cutting Grinding	A. Copper B. 5/32" 1a 145 25 C. Seal bead- 6/32" 1a 145 25 D. 2 hrs. 280 minutes. E. B.O.H. F. 1650°F 14 hr surf 950°F 24 hrs air	2073	2 1/2" R	7"	7" R	IMP	IMP	V	4 1/2"	P				
D. Ford Motor Co. E. Relia-Very Co. F. Ford Motor Co.	A. I B. .2751 .023P .0001 .00138 C. .240C D. Pace 341-352 E. B.O.H. F. 1650°F 14 hr surf 950°F 24 hrs air	.023P 19.30C 10.28H .50M0 .00138B B. Raccolloy C. Lime D. DC-REV	1. I 5/32" 1a 165 25 2. I 3/16" 2b 165 25 C. 2 hrs. 280 minutes. D. Grinding time 1 hour 40 min.	2024	1 1/4" R	3 1/2" D	0	IMP	V	0	1	8"				
A. 111656 B. 12/29/43	A. 3/8" B. R II C. .44 in. D. .018-.0205 E. Metal Thermite Co. F. Ford Motor Co.	A. 45° SV B. 3/32" C. Flame cutting Grinding	A. Copper B. 5/32" 1a 110 23 C. Seal bead- 3/16" 1a 170 24 D. 5 1/2 hours 70°F-140°F E. B.C.B. F. 1650°F 24 hrs surf 950°F 24 hrs air	2030	2 1/2" R	10 1/2" U	10 1/2" R	IMP	IMP	V	2 1/2"	P				
C. .22-.2751 D. .018-.0205 E. Pace 311-341 F. Back 311-341	.00138 C. .26-.28C D. Pace 311-341 E. B.C.B. F. 1650°F 24 hrs surf 950°F 24 hrs air	.018 C. Lime D. DC-REV	1. I 3/16" 1a 230 25 2. I 1/4" 1a 230 25 C. Root face or plate buttered with 5/32" electrode. Step back method of weld se- quence used. Back of root bead ground out.	1997	2 1/2" R	7 1/2" D	7 1/2" D	IMP	IMP	V	3 2 1/2"					

TEST IDENTIFICATION	APPROX. DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			REMARKS ON CRACKING			RADIOGRAPHIC RESULTS, ETC.				
							A. TYPE	B. TRADE NAME	C. COATING	D. AMP	E. PLATE PREPARATION	F. DEPOSITION SIZE EL. & C. LOC.	G. TYPE AND V.	H. PRE- B. POST	I. L. I.	J. L. L.	K. C. S.
A. Firing Record No. B. Date of Test C. Plate No. D. Armor Manufacturer E. Electronic Amps. F. Armor Fabricator	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. IMP E. PLACER F. HEAT TREATMENT TEMP. TIME QUENCH	A. GROOVE, INCLINED ANGLE, ROOT FACE N. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BACKING N. NOTCH C. PLATE PREPARATION	A. BACKING N. NOTCH C. PLATE PREPARATION	A. DEPOSITION SIZE EL. & C. LOC. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & 10TH PASS TEMPERATURE	A. PRE- B. None	#	VEL.	LOCATION OF B.	CRACKING	F/S	L.L.	N.I.	C.S.	LOC.	Type Ant.	
A. A 11687 B. 1/4/44 C. W 28 D. Ford Motor Co. E. Lincoln Elec. Company F. Ford Motor Co.	A. 3/8" B. R II 1.23-1.32 in .28-.325 in .021-.0275 .019-.022 P .56-.58 CR .08-.08 N1 .31-.32 MO .0013 B .27-.28 C D. Face 331-341 Back 331-331 B.O.H. SPRAY 960 F 2 ^{1/2} hr. air	A. A 111 B. 11 C 4.00 in .525 in 20.00 T 10.00 H 10.00 H B. ARMOWELD C. LINE DC-417 V C. .27-.28 C D. Face 331-341 Back 331-331 E. B.O.H. F. 1660 F 1 ^{1/2} hr. SPRAY 960 F 2 ^{1/2} hr. air	A. Copper B. 5/32" C. Flame cutting Grinding	1. 1 6/32" 1a 145 22 2. 1 5/32" 1a 150 25 3. 11 5/32" 2b 155 26 Seal bead- 6/32" 1a 156 25	1. 2008 3 ^{1/2} R 2. 2008 2 ^{1/2} R 3. 2002 1 ^{1/2} L	8"	U	-	-	P							
A. A 12696 B. 2/28/44 C. W 320 D. Ford Motor Co. E. Face Steel & Wire Co. F. Ford Motor Co.	A. 3/8" B. R II 1.23-1.32 Mn .28-.325 in .021-.0275 .019-.022 P .56-.58 CR .06-.08 N1 .31-.32 MO .0013 B .27-.28 C D. Face 331-341 Back 331-341 E. B.O.H. F. 1660 F 1 ^{1/2} hr. SPRAY 960 F 2 ^{1/2} hr. air	A. A 1 0.085 C .28-.325 in .021-.0275 .019-.022 P .56-.58 CR .06-.08 N1 .31-.32 MO .0013 B .27-.28 C D. Face 331-341 Back 331-341 E. B.O.H. F. 1660 F 1 ^{1/2} hr. SPRAY 960 F 2 ^{1/2} hr. air	A. 45° SV B. 3/16" C. Flame cutting Grinding	1. 1 1/4" 1a 280 23 2. 3. 1/4" 1a 295 23 Seal bead- 1/4" 1a 290 23	1. 2010 1/8 L 2. 2005 1 ^{1/2} L	6"	U	IMP. I	20 ^{1/2}	P							

IDENTIFICATION	ARMOR DATA	BALLISTIC RESULTS													
		JOINT DESIGN DATA		WELDING PROCEDURE		TEST		LOCATION OF R.		CRACKING					
A. PLATE THICKNESS	B. TYPE	C. TRADE NAME	D. COATING	E. CURRENT	F. POLARITY	G. DEPOSITION SIZE IN.	H. NO. TYPE AMP. V.	I. PRE	J. POST	K. L.	L. S. L.	M. C. B.	N. LOC.	O. TYPE	P. AMT
A. 12661 B. 3/9/44 C. 111C	A. 3/8"	A. A. I	A. 90° SV; $\frac{1}{8}$ " RF	A. SACKING		PASSED		L.		NO CRACKING					
D. Ford Motor Co. E. Arcs Corp. F. Ford Motor Co.	B. R. I; 1.477"n .0215 .60CR .35Mo .0013B .27C Face 351 Back 351 B. O. N 1660 F 14 hr	C. R. II; 2451 .019P 00NI 00NI .66Mo DC-71V	B. 5/32" 4.00m .75S 19-44Cr 9.57Ni - 3/16" Grinding	B. DECOUPAGE		NO CRACKING		L.		NO CRACKING					
A. 12661 B. 3/9/44 C. 111C	D. E. F.	E. G.	F. G.	G. H.	H. I.	I. J.	J. K.	K. L.	L. M.	M. N.	N. O.	O. P.	P. Q.	Q. R.	
A. TIGING SUCCESS NO.		B. DATE OF TEST		C. PLATE NO.		D. CARBON CONTENT		E. PROCESS		F. HEAT TREATMENT TEMP. TIME		G. TOTAL SULFIDE TIME & INTER PASS TEMPERATURE		H. REHEAT	
I. TIGING IMPERFECTIONS		J. ARBOR IMPERF.		K. ARBOR MANUFACTURER		L. ARBOR FABRICATOR		M. ARBOR TIME		N. ARBOR USE		O. ARBOR		P. ARBOR	
Q. ARBOR		R. ARBOR		S. ARBOR		T. ARBOR		U. ARBOR		V. ARBOR		W. ARBOR		X. ARBOR	
Y. ARBOR		Z. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR	
GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR	
OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR	
WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR	
EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR	
MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR	
UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR	
CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR	
KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR	
SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR	
AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR	
II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR	
QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR	
YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR	
GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR	
OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR	
WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR	
EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR	
KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR	
SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR	
AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR	
II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR	
OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR	
WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR	
EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR	
KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR	
SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR	
AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR	
II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR	
OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR	
WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR	
EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR	
KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR	
SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR	
AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR	
II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR	
OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR	
WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR	
EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR	
KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR	
SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR		WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR	
AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR		EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR	
II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR		MM. ARBOR		NN. ARBOR		OO. ARBOR		PP. ARBOR	
OO. ARBOR		PP. ARBOR		QQ. ARBOR		RR. ARBOR		SS. ARBOR		TT. ARBOR		UU. ARBOR		VV. ARBOR	
WW. ARBOR		XX. ARBOR		YY. ARBOR		ZZ. ARBOR		AA. ARBOR		BB. ARBOR		CC. ARBOR		DD. ARBOR	
EE. ARBOR		FF. ARBOR		GG. ARBOR		HH. ARBOR		II. ARBOR		JJ. ARBOR		KK. ARBOR		LL. ARBOR	
KK. ARBOR		LL													

IDENTIFICATION	ARCING DATA	JOINT DESIGN	WELDING	BALLISTIC RESULTS		FEATURES ON CRACKING			
				PROCEDURE	HEAT	VEL.	LOCATION OF #	CRACKING	RADIOGRAPHIC RESULTS, ETC.
A. IRING RECORD NO. B. DATE OF TEST C. PLATE NO. D. ARROW MANUFACTURER E. ELECTRODE USED F. ARROW FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. B.W. E. PROCESS F. BEAT TREATMENT TEMP. TIME	A. GROOVE, INCLINED ANGLE, ROOT FACE B. ROOT CAP C. COATING D. CURRENT & POLARITY	A. BACKUP B. DEPOSITION SIZE EL. NO. TYPE AND V. 1. ROOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PRE B. POST	#	L/S	L.I. N.L. C. B. LOC.	TYPE AND	
A. AD 450 B. 6/31/43 C. 1 D. Ford Motor Co. E. Crucible Steel Co. of America F. Standard Steel Spring Co.	A. 3/8" B. R.T.I. 1.386in .275in .0206 .021P .53CT .41Mo .26C D. Pace 341 Back 341 E. B.C.H. F. 1576 F 1 hr. water 925 F 2 hr. water	A. 45° SV B. 1/4" C. Flame cutting Grinding	A. BACKUP B. DEPOSITION SIZE EL. NO. TYPE AND V. 1. Root Type 2. Body Type 3. Groove Type C. Total Welding Time & Inter Pass Temperature	A. 100% B. None	1 2038	1 1/2" 4 1/2"	D	-	F
					2 2016	1 1/2" 7 1/2"	U	-	Plate is un-acceptable due to excessive amount of cracking. Small amount of slag and porosity.
					3 2232	2" 5 1/2"	R	-	
					4 2126	7/8" 6 1/2"	R	D IMP	1 16"

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			REMARKS ON CRACKING
							A. PRE	B. POST	C. LOCATION OF A CRACKED	D. ANT.
A. FIRING RECORD NO. B. DATE OF TEST C. PLATE NO. D. ARMOR MANUFACTURER E. ELECTRIC WIRE F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TRADE NAME C. CARBON CONTENT D. RIN E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. ANGLE, ROOT CAP C. COLDING D. CUBRETT 4 E. POLARITY	A. GROOVE, INCLINED B. ANGLE, ROOT CAP C. PLATE PREPARATION	A. BACKING B. DEPOSITION RATE EL. C. PLATE PREPARATION	A. PASS B. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE					
A. AD 366 B. 4/9/43 C. B11 D. Great Lakes E. Harrischfeiger F. Buick Motor Division	A. .5/16" B. R TV C. 1.01In .7981 .022S .050P .580T .20M0 .100T C. .28C D. Pace 331 Back 362 E. B.O.H. F. 1650°F + hr. water 930°F 2 hrs. air	A. A I B. .12C C. .4181 .0086 .085P 20.880T 9.71N1 .70H0 .06V .10C0 AW3-C C. Lime DC-REV	A. 60° DV B. 1/16" C. Flame cutting Grinding	A. 1. & 2. & 3. I 3/16" 2A 140 22 C. 34.8 minutes. D. Grinding time 1½ mins.	A. None B. None	1 1900 4" R 2 1900 4" L 3 1900 X 84" D 4 1900 4" R	6 6" D 7 4" L 8 4" D 9 4" U	1 6 1/2" IMP I 0 1 1" IMP I 1 12" IMP I 2 20" IMP V 4 44" IMP V	P Sound weld	
A. AD 414 B. 5/7/43 C. B 13 D. Great Lakes E. Harrischfeiger F. Buick Motor Division	A. 5/16" B. R TV C. 1.01In .7981 .022S .03CP .580T .20M0 .10W C. .28C D. Pace 341-352 Back 341-352 E. B.O.H. F. 1650°F + hr. water 930°F 2 hrs. air	A. A I B. .11C C. .62M .4781 .0106 .030P 19.66CT 10.41NI 1.76MO B. AW3 C. Lime D. DC-REV	A. 60° DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. I 3/16" 1a 135 22 5/32" 1a 125 23 C. 40 minutes. 80°-135° F D. Grinding time 2 minutes.	A. None B. None	1 1900 3 1/2" L 2 1900 3 1/2" L 3 1900 3 1/2" R 4 1900 1 1/2" L 5 1900 1 1/2" R 6 1900 2 1/2" L	5 1/2" U 6" D 6 1/2" D 10" U 10" R 12" U	- - - - - -	P Welds are sound.	
A. AD 414 B. 5/7/43 C. B 17 D. Jones & Laughlin E. Harrischfeiger F. Buick Motor Division	A. .6/16" B. R III C. 1.65In .26S1 .018S .018P .26M0 C. .28C D. Pace 331-341 Back 331-341 E. B.O.H. F. 1650°F + hr. water 930°F 1 1/2 hr. air	A. A I B. .11C 3.76 C. .4581 .0163 .034P 19.92CT 9.97NI 1.41M0 B. AW3-C C. Lime D. DC-REV	A. 60° DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. I 3/16" 2A 135 22 5/32" 1a 126 21 C. 42.6 minutes. 70°-170° F D. Grinding time 3 minutes.	A. None B. None	1 1900 4" L 2 1900 X 8" D 3 1900 X 2" U	10" L 9" D 2" U	- - - - - -	P Crater crack	

TEST IDENTIFICATION	ADHESIVE DATA		JOINT DESIGN		WELDING		PRODUCTION		BALLISTIC RESULTS		RESULTS ON CRACKING, ETC.		
	A. PLATE THICKNESS	B. TYPE	A. CHAMFER, INCLUDED ANGLE, ROOT FACE	B. TRADE NAME	C. COATING	D. ROOT CAP	E. PLATE PREPARATION	F. PLATE PREPARATION	G. DEPOSITION SIZE EL. NO. TYPE AMP. V.	H. DEPOSITION SIZE EL. NO. TYPE AMP. V.	I. LOCATION OF S.	J. CRACKING	K. TYPE AND
A. PLATE RECORD NO. B. DATE OF TEST C. PLATE NO. D. ADHESIVE MANUFACTURER E. ELECTRODE INFO. F. ADHESIVE FABRICATOR	A. .016"	B. R. T.I.V.	A. .11C .162in	B. 26S1 .018P	C. .010S .030P	D. .010S .030P	E. .25C Face 341 Back 362 B. AW 3 C. LIne D. DC-REV	A. .010 DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. B. 1 3/16" 3/16"	A. 120 21 135 22	A. 12 1/2" R 2 1/2" R	A. - B. -	P Crater crack.
A. AD 414 B. 6/7/43 C. B 18 D. J Jones & Laughlin E. Harnischfeger F. Buick Motor Division	A. 5/16" B. R. T.I.V. 1.65Mn .018S .018P C. .25C Face 341 Back 362 B. AW 3 C. LIne D. DC-REV	A. A I .11C .162in .4781 .010S .030P	A. .010 DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. B. 1 3/16" 3/16"	A. 120 21 135 22	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. - B. -	P Crater crack.	
A. AD 414 B. 6/7/43 C. B 19 D. J Jones & Laughlin E. Harnischfeger F. Buick Motor Division	A. 5/16" B. R. T.I.V. 1.65Mn .018S .018P C. .25C Face 341 Back 362 B. AW 3 C. LIne D. DC-REV	A. A I .11C .162in .4781 .010S .030P	A. .010 DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. B. 1 3/16" 3/16"	A. 120 21 135 22	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. 1 1900 2 1900 B. None	A. - B. -	P Crater crack.	
A. AD 399 B. 6/2/43 C. B 12 Great Lakes Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 5/16" B. R. T.I.V. 1.01Mn .0288 .030P .068C .2040 .28C Face 331 Back 362 B. AW 3 C. LIne D. DC-REV	A. A II .162in .010S .030P .068C .2040 .28C Face 331 Back 362 B. AW 3 C. LIne D. DC-REV	A. .010 DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. B. 1 3/16" 3/16"	A. 120 21 125 23	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. - B. -	P Welds are sound.	
A. AD 399 B. 6/2/43 C. B 12 Great Lakes Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 5/16" B. R. T.I.V. 1.01Mn .0288 .030P .068C .2040 .28C Face 331 Back 362 B. AW 3 C. LIne D. DC-REV	A. A II .162in .010S .030P .068C .2040 .28C Face 331 Back 362 B. AW 3 C. LIne D. DC-REV	A. .010 DV B. 1/4" C. Flame cutting Grinding	A. 1. & 2. & 3. B. 1 3/16" 3/16"	A. 120 21 125 23	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. 1 1870 2 1895 B. None	A. - B. -	P Welds are sound.	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	BALLISTIC RESULTS			REMARKS ON CRACKING																									
						A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. IRON	E. PROCESS	F. PLATE TREATMENT	G. TRADE NAME	H. COATING	I. ANGLE, BOOT FACE	J. BACKING	K. DEPOSITION RATE EL. NO. TYPE AMP. V.	L. DEPOSITION RATE EL. NO. TYPE AMP. V.	M. PLATE PREPARATION	N. ROOT TYPE	O. BODY TYPE	P. GROOVE TYPE	Q. TOTAL SELLING TIME & INTER PASS TEMPERATURE	R. LOC.	S. LOC.	T. LOC.	U. TYPE	V. AMOUNT	W. POST	X. PRE	Y. VEL.	Z. LOCATION OF J.	AA. CRACKING	BB. RADIOGRAPHIC RESULTS, ETC.	
A. Firing Process No.																																		
B. DATE OF TEST																																		
C. PLATE NO.																																		
D. ARMOR MANUFACTURER																																		
E. ELECTRODE NUMBER																																		
F. ARMOR FABRICATOR																																		
A. AD 399	A. 6/16"	A. A I	A. .11C	A. 60° DV	A. C. Flame cutting	B. 1/4"	B. 1. & 2. & 3.	C. 3/16"	D. 1a	E. 135	F. 22	G. None	H. None	I. 1838	J. 2"	K. R	L. 4 1/2"	M. D	N. -	O. -	P. -	Q. -	R. -	S. -	T. -	U. -	V. -	W. -	X. -	Y. -	Z. -	AA. P	BB. Crater Crack.	
B. 6/2/43	B. R 111	B. .065m	B. .25S1	B. .11C	B. Grinding	C. .018P	C. .475I	D. .010S	E. .030P	F. .030P	G. .030P	H. .030P	I. .030P	J. .030P	K. .030P	L. .030P	M. .030P	N. .030P	O. .030P	P. .030P	Q. .030P	R. .030P	S. .030P	T. .030P	U. .030P	V. .030P	W. .030P	X. .030P	Y. .030P	Z. .030P	AA. P	BB. Crater Crack.		
C. B 20																																		
D. Jones &																																		
E. Laughlin																																		
F. Harnischreger																																		
G. Buck Motor																																		
H. Division																																		
A. AD 399	A. 6/16"	A. A I	A. .12C	A. 60° DV	A. C. Flame cutting	B. 1/4"	B. 1. & 2. & 3.	C. 3/16"	D. 1a	E. 120	F. 23	G. None	H. None	I. 1857	J. 1 1/2"	K. R	L. 6 1/2"	M. D	N. I	O. -	P. -	Q. -	R. -	S. -	T. -	U. -	V. -	W. -	X. -	Y. -	Z. -	AA. P	BB. Sound welds.	
B. 6/2/43	B. R 111	B. .065m	B. .25S1	B. .018P	B. Grinding	C. .018S	C. .418I	D. .008S	E. .036P	F. .036P	G. .036P	H. .036P	I. .036P	J. .036P	K. .036P	L. .036P	M. .036P	N. .036P	O. .036P	P. .036P	Q. .036P	R. .036P	S. .036P	T. .036P	U. .036P	V. .036P	W. .036P	X. .036P	Y. .036P	Z. .036P	AA. P	BB. Sound welds.		
C. B 21																																		
D. Jones &																																		
E. Laughlin																																		
F. Harnischreger																																		
G. Buck Motor																																		
H. Division																																		
A. AD 454	A. 6/16"	A. A I	A. .11C	A. 60° DV	A. C. Flame cutting	B. 1/4"	B. 1. & 2. & 3.	C. 3/16"	D. 1a	E. 135	F. 22	G. None	H. None	I. 1837	J. 2 1/2"	K. R	L. 4 1/2"	M. D	N. -	O. -	P. -	Q. -	R. -	S. -	T. -	U. -	V. -	W. -	X. -	Y. -	Z. -	AA. P	BB. Sound welds.	
B. 6/2/43	B. R 111	B. .065m	B. .25S1	B. .018P	B. Grinding	C. .018S	C. .455I	D. .010S	E. .034P	F. .034P	G. .034P	H. .034P	I. .034P	J. .034P	K. .034P	L. .034P	M. .034P	N. .034P	O. .034P	P. .034P	Q. .034P	R. .034P	S. .034P	T. .034P	U. .034P	V. .034P	W. .034P	X. .034P	Y. .034P	Z. .034P	AA. P	BB. Sound welds.		
C. B 16																																		
D. Jones &																																		
E. Laughlin																																		
F. Harnischreger																																		
G. Buck Motor																																		
H. Division																																		

TEST IDENTIFICATION	ARMOR DATA		JOINT DESIGN		WELDING		PROCEDURE		HEAT		BALLISTIC RESULTS		REMARKS OR CRACKING			
	A. PLATE THICKNESS	B. TYPE	A. TYPE	B. TRADE NAME	C. COATINGS	D. BOOT CAP	E. BODY	F. CLOTHES	G. DEPOSITION RATE	H. DEPOSITION RATE EL.	I. SO. TYPE APP. V.	J. PASSAGE	K. LOCATION OF #	L. CRACKING	M. TYPE	N. AMT
A. AD 414 B. 5/7/43 C. A 21 D. Jones & Laughlin E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R 111 C. 1.38tn D. .023S .015P E. .32Mo F. .21C G. Face 341-363 H. Back 341-352 I. AW 3-C J. 160°F 50 min K. 900°F 63 min L. Quench-not given	A. A 1 B. .08C C. .377tn D. .006S E. .032P F. 18.5°C G. 9.86N H. .70Mo I. AW 3-C J. Lime K. DC-REV	A. 60° DV B. 3/16" C. Flame cutting D. Grinding	A. Not given B. 1. & 2. & 3. C. 1. 5/32" 1a 115-20 D. 1/8" 1a 106-19	A. None B. None	A. 1 1700 B. 2 1700 C. 3 1700 D. 4 1700	A. 10 ⁴ L B. 10 ⁴ R C. 10 ⁴ L D. 10 ⁴ D	A. - B. - C. - D. -	P Sound welds.							
A. AD 414 B. 5/7/43 C. A 19 D. Jones & Laughlin E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R 111 C. 1.38tn D. .023S .015P E. .32Mo F. .21C G. Face 341 H. Back 343 I. B.O.B. J. 160°F 50 min K. 900°F 63 min L. Quench-not given	A. A 1 B. .08C C. .377tn D. .006S E. .032P F. 18.5°C G. 9.86N H. .70Mo I. AW 3-C J. Lime K. DC-REV	A. 60° DV B. 3/16" C. Flame cutting D. Grinding	A. Not given B. 1. & 2. & 3. C. 1. 5/32" 2a 110-120 D. 1/8" 2a 20-21	A. None B. None	A. 1 1700 B. 2 1700 C. 3 1700	A. 3 ² L B. 5" R C. 2 ¹ L D. 5" D	A. - B. - C. - D. -	P Sound welds.							
A. AD 414 B. 5/7/43 C. A 20 D. Jones & Laughlin E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R 111 C. 1.38tn D. .023S .015P E. .32Mo F. .21C G. Face 362 H. Back 363 I. B.O.B. J. 160°F 50 min K. 900°F 63 mins L. Quench-not given	A. A 1 B. .08C C. 1.48m D. .011S E. .033P F. 20.0°C G. 10.21N H. 1.84Mo I. .06V J. .080m K. AW 3 L. Lime M. DC-REV	A. 60° DV B. 3/16" C. Flame cutting D. Grinding	A. Not given B. 1. & 2. & 3. C. 1. 5/32" 1a 115-20 D. 1/8" 1a 105-19	A. None B. None	A. 1 1700 B. 2 1700	A. 10 ⁴ R B. 4" D C. 44.4 minutes. 75°-145°F D. Grinding time 2 ¹ / ₂ mins.	A. - B. - C. - D. -	P Sound welds.							

IDENTIFICATION	ELECTRODE DATA	JOINT DESIGN	WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			REMARKS ON CRACKING	RADIOGRAPHIC RESULTS, ETC.					
						A. TYPE	B. TRADE NAME	C. CARBON CONTENT	D. WELD CAP	E. COATING	F. DEPOSITION SIZE EL. NO.	G. TYPE APP. V.	H. LOC.	I. TYPE	J. ANT.
A. TIGING SEEDS NO. B. DATE OF TEST C. PLATE NO. D. AEROS SURFACER E. ELECTRODE MFG. F. AEROS FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. BW E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. GROOVE, INCLINED B. TRADE NAME C. COATING D. CURRENT & POLARITY	A. BACKING B. ANGLE, ROOT FACE C. ROOT CAP D. PLATE PREPARATION	A. BACKING B. DEPOSITION SIZE EL. NO. TYPE APP. V. 1. ROOT TYPE 2. BODY TYPE 3. CROWN TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. PAC B. POST	#	V.E.	L.L.	R.L.	C.B.	LOC.				
A. AD 414 B. 6/21/43 C. A 18 D. Great Lakes E. Hartischreger F. Buick Motor Division	A. 1/4" B. R.TV .71In .7061 .0295 .015P .61Cr .22Mo .082r .27% C. Face 363 Back 363 D. Face 363 Back 363 E. D.O.H. F. 1600°F 50 min. 900°F 63 min.	A. A I .15C 1.4B Mn -47S1 .011S .033P 20. 00CT 10.21N1 1.8BMo .06V .08Cu B. AW 3 C. Lime D. DC-REV	A. 60° DV B. 3/16" C. Flame cutting Grinding	A. Not given B. 1. 8 2. & 3. I 5/32" 2a 115 20 C. 34.4 minutes. 75° - 195°F D. Grinding time 2½ minutes.	A. None B. None	1	1700	5/8	U	IMP	I	8½	P	Crater crack.	
A. AD 388 B. 4/21/43 C. A 16 D. Great Lakes E. Alloy Rods Co. F. Buick Motor Division	A. 1/4" B. R.TV .71In .7061 .0295 .015P .61Cr .22Mo .082r .27% C. Face 363 Back 363 D. Face 363 Back 363 E. B.O.H. F. 1600°F 50 min. 900°F 1 hr.	A. A II .08C 1.04Mn .26S1 .024S .041P 18. 97%Cr 10.08N1 2.01Mo .06V .05Zr B. 3/16" C. Lime D. DC-REV	A. 60° DV B. 3/16" C. Flame cutting Grinding	A. Not given B. 1. 8 2. & 3. I 5/32" 2a 130 22 C. 35 minutes. 70° - 195°F D. Grinding time 4 minutes.	A. None B. None	1	1700	2½	5"	U	IMP	I	24½	P	IMP V 11½ - 36°
A. AD 388 B. 4/21/43 C. A 17 D. Great Lakes E. Hartischreger F. Buick Motor Division	A. 1/4" B. R.TV .71In .7061 .0286 .015P .61Cr .22Mo .082r .27% C. Face 363 Back 363 D. Face 363 Back 363 E. B.O.H. F. 1600°F 50 min. 900°F 1 hr.	A. A I .15C 1.48Mn .47S1 .011S .033P 20. 00CT 10.21N1 1.84Mo .06V .08Cu B. AW 3 C. Lime D. DC-REV	A. 60° DV B. 3/16" C. Flame cutting Grinding	A. Not given B. 1. 8 2. & 3. I 5/32" 2a 115 23 C. 34 minutes. 65° - 185°F D. Grinding time 3 minutes.	A. None B. None	1	1700	9"	U	IMP	I	10	P		

IDENTIFICATION	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		BALLISTIC RESULTS		REMARKS ON CRACKING	
	A. PLATE THICKNESS	B. TYPE	A. GROOVE, INCLINED ANGLE, ROOT FACE	B. DEPOSITION SIZE EL.	C. PASSES	D. TYPE APP. V.	E. DEPOSITION SIZE EL.	F. TYPE APP. V.	G. LOC.	H. CRACKING	I. RADIOGRAPHIC RESULTS, ETC.	
A. FIBLING RECORD NO. B. DATE OF TEST C. PLATE NO. D. ARMS MANUFACTURER E. ELECTRODE, WIRE, F. ARMS FABRICATOR	A. .0651 B. R IV C. A 28 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. .0651 B. .070in .0175 .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. B.O.H. F. 1650 F + hr. water 90°F 1+ hr. air	A. A 1 B. .06C C. .0777in .015P .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. AW 3-C F. 1650 F + hr. water 90°F 1+ hr. air	A. 60° DV B. 316 C. Flame cutting Grinding	A. Not Given B. 4-2 & 3. 1. 5/32" 2a C. 34 minutes. 75°-80°F D. Grinding time 3 minutes.	A. None B. None	T/S	L.L.	B.L.	C. B.	TYPE ANT	
A. AD 454 B. 6/2/43 C. A 28 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. .0651 B. R IV C. A 28 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. A 1 B. .06C C. .0777in .015P .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. B.O.H. F. 1650 F + hr. water 90°F 1+ hr. air	A. 60° DV B. 316 C. Flame cutting Grinding	A. Not Given B. 4-2 & 3. 1. 5/32" 2a C. 34 minutes. 75°-80°F D. Grinding time 3 minutes.	A. None B. None	T/S	X	104	D	IMP	I 20+	
A. AD 454 B. 6/2/43 C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. .0651 B. R IV C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. A 1 B. .06C C. .0777in .015P .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. B.O.H. F. 1650 F + hr. water 90°F 1+ hr. air	A. 60° DV B. 316 C. Flame cutting Grinding	A. Not Given B. 4-2 & 3. 1. 5/32" 2a C. 45 minutes. 75°-95°F D. Grinding time 2 minutes.	A. None B. None	T/S	X	104	U	IMP	I 18" 1/2 38"	
A. AD 454 B. 6/2/43 C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. .0651 B. R IV C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. A 1 B. .06C C. .0777in .015P .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. B.O.H. F. 1650 F + hr. water 90°F 1+ hr. air	A. 60° DV B. 316 C. Flame cutting Grinding	A. Not Given B. 4-2 & 3. 1. 5/32" 2a C. 45 minutes. 75°-95°F D. Grinding time 2 minutes.	A. None B. None	T/S	L	84	U	IMP	I 74" P	
A. AD 454 B. 6/2/43 C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. .0651 B. R IV C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. A 1 B. .06C C. .0777in .015P .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. B.O.H. F. 1650 F + hr. water 90°F 1+ hr. air	A. 60° DV B. 316 C. Flame cutting Grinding	A. Not Given B. 4-2 & 3. 1. 5/32" 2a C. 45 minutes. 75°-95°F D. Grinding time 2 minutes.	A. None B. None	T/S	R	84	D	IMP	I 64" V 12+	
A. AD 454 B. 6/2/43 C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. .0651 B. R IV C. A 29 D. Great Lakes Steel Corp. E. Parischreger F. Buick Motor Division	A. A 1 B. .06C C. .0777in .015P .04CT .082r C. .28C D. Face 341-362 Back 341-362 E. B.O.H. F. 1650 F + hr. water 90°F 1+ hr. air	A. 60° DV B. 316 C. Flame cutting Grinding	A. Not Given B. 4-2 & 3. 1. 5/32" 2a C. 45 minutes. 75°-95°F D. Grinding time 2 minutes.	A. None B. None	T/S	R	84	U	IMP	I 13 1/2 40%	

IDENTIFICATION	ABROS DATA	ELECTRODE DATA			JOINT DESIGN		WELDING PROCEDURE		TEST		BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOPHOTOGRAPHIC RESULTS, ETC.	
		A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. DIA.	E. CURRNT & POLARITY	F. TRADE NAME	G. ANGLE, ROOT FACE	H. ROOT GAP	I. PLATE PREPARATION	J. DEPOSITION SIZE EL. NO. TYPE AMP. V.	K. PASSES	L. LOCATION OF S.	M. CRACKING	N. TYPE AMT	O. VELL.
A. A 12204 B. 1/4/44 C. M 58	A. 1/4" B. R.V 1.00M .48S1 .018S .012P .24Cr .48N1 .12Mo .32C D. Face 362 Back 362 E. B.O.H. F. 1650°F 1 hr. water 860°F 2 hrs. water	A. A I .07-.12C 3.60-4.18H B. 1/4" C. Flame cutting .39-.50S1 .012-.018S .031-.037P 2C-25- 21.00Cr 9.00- 9.68N1 .06-.85Mo B. AW 3-C C. Lime D. DC-T-EV	A. 60° DV B. 1/4" C. Flame cutting	A. Not Given B. 1. & 2. & 3. 5/32" 1a 160 24 5/32" 1a 120 24	A. 60° SV 3/32"■ B. 1/4" C. Flame cutting	A. None B. None	X 164B	X 12½ U	IMF	I 184°	P	Evidence of under cutting.				
A. A 12204 B. 1/4/44 C. M 59	A. 1/4" B. R.V 1.00M .48S1 .018S .012P .24Cr .48N1 .12Mo .32C D. Face 362 Back 362 E. B.O.H. F. 1650°F 1 hr. water 860°F 2 hrs. water	A. A I .10-.11C 3.82-.04H B. 1/4" C. Flame cutting .26-.61S1 .009-.011S .012-.036P 19.4-18.5Cr 6.4-9.5Ni .46-.75Mo B. AW 3-C C. Lime D. DC-REV	A. 60° SV 3/32"■ B. 1/4" C. Flame cutting	A. Copper B. 1/4" 3. 3/16" 1a 170 28 Seal bead- 3/16" 1a 155 24 C. 3 hours. 70°-100°F D. - - -	A. None B. None	X 1618	X B"	U	IMF	I 184°	P	Plate only 35½" long				
A. A 12204 B. 1/4/44 C. M 60	A. 1/4" B. R.V 1.00M .48S1 .018S .012P .24Cr .48N1 .12Mo .32C D. Face 362 Back 362 E. B.O.H. F. 1650°F 1 hr. water 860°F 2 hrs. water	A. 60° SV 3/32"■ B. 1/4" C. Flame cutting .26-.61S1 .009-.011S .012-.036P 19.4-19.5Cr 9.4-9.5Ni .46-.75Mo B. AW 3-C C. Lime D. DC-REV	A. Copper B. 1/4" 3. 3/16" 1a 185 2B Seal bead- 3/16" 1a 150 24 C. 3½ hours 70°-90°F D. - - -	A. None B. None	X 1628	R	9" D	IMF	I 184°	P	364°					
A. A 12204 B. 2/18/44 C. M 60	A. 1/4" B. R.V 1.01M .24S1 .021S .014P .44Cr .42Ni .18Mo .29C D. Face 362 Back 362 E. B.O.H. F. 1650°F water 860°F water	A. 60° SV 3/32"■ B. 1/4" C. Flame cutting .26-.61S1 .009-.011S .012-.036P 19.4-19.5Cr 9.4-9.5Ni .46-.75Mo B. AW 3-C C. Lime D. DC-REV	A. Copper B. 1/4" 3. 3/16" 1a 185 2B Seal bead- 3/16" 1a 150 24 C. 3½ hours 70°-90°F D. - - -	A. None B. None	X 1545	X 7½ U	IMF	I 184°	P							

IDENTIFICATION	ANODE DATA	ELECTRODE DATA	JOINT DESIGN		WELDING	PROCEDURE	BEAT	BALLISTIC RESULTS				REMARKS ON CRACKING	RADIOGRAPHIC RESULTS, ETC.							
			A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. IRON	E. PHOSPHORUS	F. HEAT TREATMENT	G. TRADE NAME	H. COATING	I. CURRENT	J. POLARITY	K. ANGLE, ROOT FACE	L. ROOT CAP	M. PLATE PREPARATION	N. NO. TYPE AND V.	O. DEPOSITION SIZE EL.	P. LOCATION OF #	Q. CRACKING	R. TYPE AND V.
A. A 11306 B. 12/14/42 C. M 56 D. Republic Steel Corp. E. Harnischreger Corp. F. Buick Motor Division	A. 1/4" B. R V C. 1.00% .48Si .018S .012P .24Cr .48Ni .12Mo .32C D. Face 352 Back 362 E. B.O.H. F. 1650 F 1 hr. water 800 F 2 hrs. water	A. A 1 B. 1/4" C. Flame cutting	A. 60° DV B. 1/4" C. Flame cutting	A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. REMARKS	A. None B. None	E. 1634	F/S	M	V/E	L/I	N/L	C. S.	IMP I	7 1/2"	IMP I	2 1/2"	P
A. A 11306 B. 12/14/43 C. M 60 D. Republic Steel Corp. E. Harnischreger Corp. F. Buick Motor Division	A. 1/4" B. R V C. 0.91% .57Si .018S .014P .25Cr .48Ni .11Mo .33C D. Face 352 Back 352 E. B.O.H. F. 1650 F 1 hr. water 800 F 2 hrs. water	A. A 1 B. 1/4" C. Flame cutting	A. Not Given B. 1/4" C. Flame cutting	A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. REMARKS	A. None B. None	E. 1634	F/S	M	V/E	L/I	N/L	C. S.	IMP I	10"	IMP V	14 1/2"	Small amount of porosity.
A. A 11306 B. 12/14/43 C. M 60 D. Republic Steel Corp. E. Harnischreger Corp. F. Buick Motor Division	A. 1/4" B. R V C. 0.91% .57Si .018S .014P .25Cr .48Ni .11Mo .33C D. Face 352 Back 352 E. B.O.H. F. 1650 F 1 hr. water 800 F 2 hrs. water	A. A 1 B. 1/4" C. Flame cutting	A. Not Given B. 1/4" C. Flame cutting	A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. REMARKS	A. None B. None	E. 1634	F/S	M	V/E	L/I	N/L	C. S.	IMP I	10"	IMP V	2 1/2"	
A. A 12304 B. 1/4/44 C. M 57 D. Republic Steel Corp. E. Harnischreger Corp. F. Buick Motor Division	A. 1/4" B. R V C. 1.01% .24Si .021S .014P .42Cr .42Ni .13Mo .29C D. Face 352 Back 352 E. B.O.H. F. 1650 F 1 hr. water 800 F 2 hrs. water	A. A 1 B. 1/4" C. Flame cutting	A. Not Given B. 1/4" C. Flame cutting	A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. REMARKS	A. None B. None	E. 1594	F/S	M	V/E	L/I	N/L	C. S.	IMP I	9 1/2"	IMP U	15 1/2"	P
A. A 12304 B. 1/4/44 C. M 57 D. Republic Steel Corp. E. Harnischreger Corp. F. Buick Motor Division	A. 1/4" B. R V C. 1.01% .24Si .021S .014P .42Cr .42Ni .13Mo .29C D. Face 352 Back 352 E. B.O.H. F. 1650 F 1 hr. water 800 F 2 hrs. water	A. Not Given B. 1/4" C. Flame cutting	A. Not Given B. 1/4" C. Flame cutting	A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. REMARKS	A. None B. None	E. 1594	F/S	M	V/E	L/I	N/L	C. S.	IMP I	9"	IMP D	10"	Evidence of undercutting.
A. A 12304 B. 1/4/44 C. M 57 D. Republic Steel Corp. E. Harnischreger Corp. F. Buick Motor Division	A. 1/4" B. R V C. 1.01% .24Si .021S .014P .42Cr .42Ni .13Mo .29C D. Face 352 Back 352 E. B.O.H. F. 1650 F 1 hr. water 800 F 2 hrs. water	A. Not Given B. 1/4" C. Flame cutting	A. Not Given B. 1/4" C. Flame cutting	A. BACKING	B. DEPOSITION SIZE EL.	C. PLATE PREPARATION	D. REMARKS	A. None B. None	E. 1594	F/S	M	V/E	L/I	N/L	C. S.	IMP IV	17 1/2"	IMP V	42"	

IDENTIFICATION	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		HEAT		BALLISTIC RESULTS			REMARKS ON CRACKING RADIOGRAPHIC RESULTS, ETC	
	A. PLATE THICKNESS	B. TYPE	C. GROOVE INCLUDED	D. BACKING	E. ANGLE, ROOT FACE	F. DEPOSITION SIZE EL.	G. NO. TYPE AMP.	H. VOLTAGE	I. LOCATION OF R.	J. CRACKING	K. LOC.	L. TYPE	M. AMT		
A. A 10913 F. 11/8/43 C. SO D. Republic Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R. V C. 1.000" D. .018S .012P E. .240T .48N! F. .12M G. .32C H. Pace 352 I. Back 352 J. B. C. K. water L. 1850°F 2 hrs. M. water N. 80°F 3 hrs. O. air	A. A. I B. .10C C. 3.77mm	A. 80° SV B. 1/4" 3.77mm C. Flame cutting	A. Not given B. 1. & 2. & 3. 5/32"	B. 1. 3/16" 1a 215 24 2. 186 24	C. 38.3 minutes. 75°F-140°F D. Grinding time 2.5 minutes	A. None B. None	1 1058 2 1577	1 1/4" R 2 3/8" R	1 7 1/2" U IMP 2 3" D IMP	1 2" P V 121"				
A. A 11305 B. 12/14/43 C. A 35 D. Great Lakes Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R. TV C. .70m .50S1 D. .017S .015P E. .082T .25M0 F. .28C G. Pace 341-352 H. Back 341-352 I. b.O.H. J. water K. 1850°F 2 hr. L. water M. 910°F 1 1/2 hrs. N. air	A. A. I B. .10-.12C C. 3.77-.423	A. 80° DV B. 1/4" Mn C. Flame cutting	A. Not given B. 1. & 2. & 3. 5/32"	B. 1. 3/16" 1a 180 22 2. 150 21	C. 37.2 minutes. 70°F-135°F D. Grinding time 2-3/4 minutes	A. None B. None	1 1057 2 1828	1 1/4" R 2 1" R	1 8 1/2" U IMP 2 7 1/2" D IMP	1 3 1/2" P V 9 1/2"				
A. A 11305 B. 12/14/43 C. A 36 D. Great Lakes Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R. TV C. .70m .50S1 D. .017S .015P E. .082T .25M0 F. .28C G. Pace 341-352 H. Back 341-352 I. b.O.H. J. water K. 1850°F 2 hr. L. water M. 910°F 1 1/2 hrs. N. air	A. A. I B. .10-.12C C. 3.77-.423	A. 80° DV B. 1/4" Mn C. Flame cutting	A. Not given B. 1. & 2. & 3. 5/32"	B. 1. 3/16" 1a 180 22 2. 150 21	C. 38.3 minutes. 70°F-120°F D. Grinding time 1 1/2 minutes	A. None B. None	3 1818	3 1" R	3 7 1/2" D IMP	1 4" V	15 1/2"	46 1/2"		
A. A 11305 B. 12/14/43 C. A 36 D. Great Lakes Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R. TV C. .70m .50S1 D. .017S .015P E. .082T .25M0 F. .28C G. Pace 341-352 H. Back 341-352 I. b.O.H. J. water K. 1850°F 2 hr. L. water M. 910°F 1 1/2 hr. N. air	A. A. I B. .10-.12C C. 3.77-.423	A. 80° DV B. 1/4" Mn C. Flame cutting	A. Not given B. 1. & 2. & 3. 5/32"	B. 1. 3/16" 1a 180 22 2. 150 21	C. 38.3 minutes. 70°F-120°F D. Grinding time 1 1/2 minutes	A. None B. None	4 1811	4 1" X	8 7/8" U IMP	1 1 1/2" P V 9 1/2"				
A. A 11305 B. 12/14/43 C. A 36 D. Great Lakes Steel Corp. E. Harnischfeger F. Buick Motor Division	A. 1/4" B. R. TV C. .70m .50S1 D. .017S .015P E. .082T .25M0 F. .28C G. Pace 341-352 H. Back 341-352 I. b.O.H. J. water K. 1850°F 2 hr. L. water M. 910°F 1 1/2 hr. N. air	A. A. I B. .10-.12C C. 3.77-.423	A. 80° DV B. 1/4" Mn C. Flame cutting	A. Not given B. 1. & 2. & 3. 5/32"	B. 1. 3/16" 1a 180 22 2. 150 21	C. 38.3 minutes. 70°F-120°F D. Grinding time 1 1/2 minutes	A. None B. None	5 1816	5 3" R	9 1/2" D IMP	0 1 7 1/2" O V 5"	23 1/2"			

TESTIFICATION	ADSOR DATA	ELECTRONIC DATA	JOINT DESIGN	WELDING	PROCEDURE	HEAT		WALL STATIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS, ETC.	
						A. PRE	B. POST	F/S	L.L.	R.L.	C.B.	LOC.	TYPE
A. FIRING RECORD NO. B. 4/2,3/43 C. PLATE NO. D. HORNISCHERGER E. ELECTRODE MFG. F. ARMOR FABRICATOR	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. IRON E. PROCESS F. HEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. COATING C. ANGLE. ROOT FACE D. ROOT GAP E. PLATE PREPARATION F. CURRENT & POLARITY	A. GROOVE, INCLINED B. ANGLE. ROOT FACE C. PLATE PREPARATION	A. RACING B. PLATES C. PLATES	A. DEPOSITION SIZE EL. NO. TYPE AMP. V. 1. ROOT TYPE 2. BODY TYPE 3. GROW TYPE C. TOTAL WELDING TIME & INTER PARS TEMPERATURE								
A. AD 376 B. 4/2,3/43 C. KW 180 F D. Chevrolet Forge E. Harnischfeiger Corp. F. Chevrolet Motor Company	A. 1/4" B. R IV .84Mn .7081 .0198 .016P .05Cr .19Mo .29C D. Face 321 Back 321 E. B.O.H. F. 1600°F 32 min water 6° 1050°F 4 hrs. air 81° 1000°F 4 hrs. air	A. A I B. 1/4" 3.89in C. Grinding D. None Given E. Copper F. 1. 2. 3. 1 1/4" 1a 180-250 3/16" 1a 140-175 25/28 C. 4 hours. 75°-120° D. Grinding time, none.	A. None Given B. 1/4" C. Grinding D. None Given E. Copper F. 1. 2. 3. 1 1/4" 1a 180-250 3/16" 1a 140-175 25/28 C. 4 hours. 75°-120° D. Grinding time, none.	A. None B. None	A. None B. None	1 1700 1 1/8" L	2 1700 1" R	1" D	1" D	1" D	1" D	P	
A. AD 376 B. 4/2,3/43 C. KW 181 F D. Chevrolet Forge E. Harnischfeiger F. Chevrolet Motor Company	A. 1/4" B. R IV .84Mn .7081 .0198 .016P .05Cr .19Mo .29C D. Face 321 Back 321 E. B.O.H. F. 1600°F 32 min water 6° 1050°F 4 hrs. air 81° 1000°F 4 hrs. air	A. None Given B. 1/4" 3.89in C. Grinding D. None Given E. Copper F. 1. 2. 3. 1 1/4" 1a 180-250 3/16" 1a 140-175 25/28 C. 5 hours. 80°-110° D. Grinding time, none	A. None Given B. 1/4" 3.89in C. Grinding D. None Given E. Copper F. 1. 2. 3. 1 1/4" 1a 180-250 3/16" 1a 140-175 25/28 C. 5 hours. 80°-110° D. Grinding time, none	A. None B. None	A. None B. None	1 1700 2 1/4" R	2 1700 X	1" R	1" R	1" R	1" R	P	
A. AD 376 B. 4/2,3/43 C. KW 181 F D. Chevrolet Forge E. Harnischfeiger F. Chevrolet Motor Company	A. 1/4" B. R IV .84Mn .7081 .0198 .016P .05Cr .19Mo .29C D. Face 321 Back 321 E. B.O.H. F. 1600°F 32 min water 6° 1050°F 4 hrs. air 81° 1000°F 4 hrs. air	A. None Given B. 1/4" 3.89in C. Grinding D. None Given E. Copper F. 1. 2. 3. 1 1/4" 1a 180-250 3/16" 1a 140-175 25/28 C. 5 hours. 80°-110° D. Grinding time, none	A. None Given B. 1/4" 3.89in C. Grinding D. None Given E. Copper F. 1. 2. 3. 1 1/4" 1a 180-250 3/16" 1a 140-175 25/28 C. 5 hours. 80°-110° D. Grinding time, none	A. None B. None	A. None B. None	1 1700 2 1/4" R	2 1700 X	1" R	1" R	1" R	1" R	P	

IDENTIFICATION	ARMOR DATA	ELECTRODE DATA	JOINT SECTION	WELDING	PROCEDURE	BEAT		BALLISTIC RESULTS		REMARKS ON CRACKING		RADIOGRAPHIC RESULTS		
						A. PAE	B. POST	#	V.E.	LOCATION OF F.	T/S	L.L.	S.L.	C.B.
A. Firing Acces No. B. Date of Test C. Plate No. D. Armor Manufacturers E. Electrical Arcs. F. Armor Fabricator	A. PLATE THICKNESS B. TYPE C. CARBON CONTENT D. MM. E. PROCTER F. BEAT TREATMENT TEMP. TIME QUENCH	A. TYPE B. TRADE NAME C. COATING D. CUBATURE E. POLARITY	A. GROOVE, INCLUDED ANGLE, BOOT FACE B. BOOT CAP C. PLATE PREPARATION	I. BACKING II. DEPOSITION SIZE EL. NO. TYPE AMP. I. 1. BOOT TYPE 2. BODY TYPE 3. GROOVE TYPE C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. none Given DV B. 1/4"	A. I	B. 1/4"	1	1700	1 1/2"	D	IMF	I	12 1/2"
A. AD 376 B. 4 1/2, 3/43 C. IV 1/2 F D. Chevrolet Forge E. Crucible Steel Corp. F. Chevrolet Motor Co.	A. 1/4" B. R IV .84in .7051 .018S .018P .050T .19P0 .29C C. Face 331-541 D. Back 331-541 10.0N1 1.30H0 E. B.O.H. F. 1600 F 32 minB. Armorize water 950 F 3 hrs. air	A. I .12C 4.10Hn .46S1 .021S .058P 19.7C 10.0N1 1.30H0 Back 331-541 10.0N1 1.30H0 C. T10 ₂ D. DC-REV	B. Grinding C. Grinding	1. 4 2. 4 3. 1 1/4" 1a 190-250 26-28 3/16" 1a 140-175 25-28				2	1800	3" 7"	L	IMF	I	34
A. AD 376 B. 4 1/2, 3/43 C. IV 183F D. Chevrolet t Forge E. Crucible Steel Co. F. Chevrolet Motor Co.	A. 1/4" B. R IV .84in .7051 .018S .018P .050T .19P0 C. Face 331-541 D. Back 331-541 10.0N1 1.30H0 E. B.O.H. F. 1600 F 32 minB. Armorize water 950 F 3 hrs. air	A. I .12C 4.10Hn .46S1 .021S .058P 19.7C 10.0N1 1.30H0 Back 331-541 10.0N1 1.30H0 C. T10 ₂ D. DC-REV	B. Grinding C. Grinding	1. 4 2. 4 3. 1 1/4" 1a 190-250 26-28 3/16" 1a 140-175 25-28				2	1800	3" 7"	L	IMF	I	26 1/2"
						A. None B. None	A. None B. None	1	1700	1 1/2"	L	IMF	I	P
														slight slag and porosity.
														2"

IDENTIFICATION	ARCING DATA		JOINT DESIGN		WELDING PROCEDURE		TEST		BALLISTIC RESULTS		REPORTS OR CHARTING	
	A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. SHELL	E. PROCESSES	F. HEAT TREATMENT TEMP.	G. PLATE PREPARATION	H. DEPOSITION SIZE EL. NO.	I. ROOT TYPE	J. CROWN TYPE	K. TOTAL WELDING TIME & INTER PASS TEMPERATURE	L. X-RAY
A. FURNACE NO. B. DATE OF TEST C. PLATE NO. D. ANODE MANUFACTURER E. ELECTRODE MFG. F. ANODE FABRICATOR	A. PLATE THICKNESS B. TRADE NAME C. COATING D. SHELL	A. GROOVE, INCLINED B. ANGLE, ROOT FACE C. ROOT CAP	A. DEPOSITION SIZE EL. NO. TYPE AMP. V. B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. PLATE PREPARATION	A. PRE- S. POST	#	VEL. F/S	LOCATION OF #	CRACKING L.I. R.L. C.S. LOC.	TYPE AND PENETRATION	IMPACT	RADIOGRAPHIC RESULTS, ETC.	
A. AD 375 B. 4/2, 3/43 C. X-184-F D. Chevrolet Forge E. Hamischteger Corp. F. Chevrolet Motor	A. 1/4" B. R-IV • 84 Mn • 70S1 • 0186 • 016P • 050Cr • 18Mo • 02Cr Face 331-341 Back 331-341 E. B.O.U. F. 1800°F 32 min water 950°F 2 hrs. air 10.1N1 1.07%O B. AW 3-C C. Lime D. DC-REV	A. A 1 .14-.15C B. 3/16" .89-.447% C. Grinding	A. 60° SV B. 3/16" C. Grinding	1. I 5/32" 1a 110-140 24-26 2. 8 3. 3/16" 1a 140-175 25-26 C. 6 hours. 80°-120°F D. Grinding time, none.	A. None B. None	1 1700	1" L	6 1/2" U	IMP I 11"	P	Small amount of porosity and slag. Weld is sound.	
A. AD 375 B. 4/2, 3/43 C. X-184-F D. Chevrolet Forge E. Hamischteger Corp. F. Chevrolet Motor	A. 1/4" B. R-IV • 84 Mn • 70S1 • 0186 • 016P • 050Cr • 18Mo • 02Cr Face 331-341 Back 331-341 E. B.O.U. F. 1800°F 32 min water 950°F 2 hrs. air 10.1N1 1.07%O B. AW 3-C C. Lime D. DC-REV	A. A 1 .14-.15C B. 3/16" .89-.447% C. Grinding	A. Copper B. 3/16" C. Grinding	1. I 5/32" 1a 110-140 24-26 2. 8 3. 3/16" 1a 140-175 25-26 C. 4½ hours. 80°-120°F D. Grinding time, none.	A. None B. None	1 1700	2" R	4 1/2" D	IMP I 10"	P	Small amount of slag inclusions. 1/2" of incomplete fusion.	
A. AD 375 B. 4/2, 3/43 C. X-184-F D. Chevrolet Forge E. Hamischteger Corp. F. Chevrolet Motor	A. 1/4" B. R-IV • 84 Mn • 70S1 • 0186 • 016P • 050Cr • 18Mo • 02Cr Face 331-341 Back 331-341 E. B.O.U. F. 1800°F 32 min water 950°F 2 hrs. air 10.1N1 1.07%O B. AW 3-C C. Lime D. DC-REV	A. A 1 .14-.15C B. 3/16" .89-.447% C. Grinding	A. Copper B. 3/16" C. Grinding	1. I 5/32" 1a 110-140 24-26 2. 8 3. 3/16" 1a 140-175 25-26 C. 4½ hours. 80°-120°F D. Grinding time, none.	A. None B. None	2 1800	1" L	4 1/2" U	IMP I 10"	P	Plate is borderline acceptable. Slag inclusions, one star shaped crater crack at crossbar.	
A. AD 375 B. 4/2, 3/43 C. X-184-F D. Chevrolet Forge E. Crucible Steel Company F. Chevrolet Motor	A. 1/4" B. R-IV • 84 Mn • 70S1 • 0186 • 016P • 050Cr • 18Mo • 02Cr Face 331-341 Back 331-341 E. B.O.U. F. 1800°F 32 min water 950°F 3 hrs. air 10.1N1 1.07%O B. Armor C. T102 D. DC-REV	A. A 1 .14-.15C B. 3/16" .89-.447% C. Grinding	A. Copper B. 3/16" C. Grinding	1. I 5/32" 1a 110-140 24-26 2. 8 3. 3/16" 1a 140-175 25-26 C. 5 hours. 80°-120°F D. Grinding time, none.	A. None B. None	1 1700	2" L	10 1/2" U	IMP I 16"	P	Plate is borderline acceptable. Slag inclusions, one star shaped crater crack at crossbar.	

IDENTIFICATION	ARROW DATA	JOINT DESIGN		WELDING	PROCEDURE	HEAT	BALLISTIC RESULTS			REMARKS ON CRACKING	RADIOGRAPHIC RESULTS, ETC.							
		A. PLATE THICKNESS	B. TRADE NAME	C. CURRENT	D. R.H.	E. COATING	F. PLATE PREPARATION	G. DEPOSITION SIZE EL. NO.	H. TYPE AMP. V.	I. LOCATION OF H	J. PRE	K. POST	L. I.	M. R.L.	N. C.	O. LOC.	P. TYPE	Q. ANG.
A. AD 375 B. 4/2,3/43 C. XV-187-F D. Chevrolet E. Forge F. Crucible Steel Co. G. Chevrolet Motor	A. 1/4" B. R. TV C. .84Mn .70S1 D. .18P E. .18Mo F. .29C G. Face 331-541 H. Back 331-541 I. .30H J. 1600 F. 32 K. min. water L. 950 F 3 hrs. M. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE															
A. AD 375 B. 4/2,3/43 C. XV-187-F D. Chevrolet E. Forge F. Crucible Steel Co. G. Chevrolet Motor	A. 1/4" B. R. TV C. .84Mn .70S1 D. .18P E. .18Mo F. .29C G. Face 331-541 H. Back 331-541 I. .30H J. 1600 F. 32 K. min. water L. 950 F 3 hrs. M. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. A. 80° SV B. 3/16" Grinding C. 4.10-4.38 tn D. .39-.46 S1 E. .008-.021	A. A. COPPER B. Copper C. Grinding D. 5/32" 1a 110-140 E. 3/16" 1a 24-25 F. 1a 140-175 G. 25-26	A. None B. None	1 1700	1 12 1/2	F									
A. AD 375 B. 4/2,3/43 C. XV-188-F D. Chevrolet E. Harmschirger Corp. F. Chevrolet Motor	A. 1/4" B. R. TV C. .84Mn .70S1 D. .18P E. .29C F. Face 295 G. Back 295 H. .30H I. 1600 F. 32 J. min. water K. 1050 F 4 hrs. L. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. A. 80° SV B. 3/16" Grinding C. 4.20-4.47 tn D. .47-.65 S1 E. .008-.011	A. Not given B. Seal bead- C. 5/32" 1a 110-140 D. 24-25 E. 8 3. 1/4" 1a 190-250 F. 28-28	A. None B. None	1 1700	1 12 1/2	P									
A. AD 375 B. 4/2,3/43 C. XV-189-F D. Chevrolet E. Harmschirger Corp. F. Chevrolet Motor	A. 1/4" B. R. TV C. .84Mn .70S1 D. .18P E. .29C F. Face 331-541 G. Back 331-541 H. .30H I. 1600 F. 32 J. min. water K. 1050 F 4 hrs. L. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. A. 80° SV B. 3/16" Grinding C. 4.20-4.47 tn D. .47-.65 S1 E. .008-.011	A. Not given B. Seal bead- C. 5/32" 1a 110-140 D. 24-25 E. 8 3. 1/4" 1a 190-250 F. 28-28	A. None B. None	1 1700	1 12 1/2	P									
A. AD 375 B. 4/2,3/43 C. XV-189-F D. Chevrolet E. Harmschirger Corp. F. Chevrolet Motor	A. 1/4" B. R. TV C. .84Mn .70S1 D. .18P E. .29C F. Face 331-541 G. Back 331-541 H. .30H I. 1600 F. 32 J. min. water K. 1050 F 4 hrs. L. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. A. 80° SV B. 3/16" Grinding C. 4.20-4.47 tn D. .47-.65 S1 E. .008-.011	A. Not given B. Seal bead- C. 5/32" 1a 110-140 D. 24-25 E. 8 3. 1/4" 1a 190-250 F. 28-28	A. None B. None	1 1700	1 12 1/2	P									
A. AD 375 B. 4/2,3/43 C. XV-189-F D. Chevrolet E. Harmschirger Corp. F. Chevrolet Motor	A. 1/4" B. R. TV C. .84Mn .70S1 D. .18P E. .29C F. Face 331-541 G. Back 331-541 H. .30H I. 1600 F. 32 J. min. water K. 1050 F 4 hrs. L. air	A. GROOVE, INCLUDED ANGLE, ROOT FACE B. ROOT GAP C. PLATE PREPARATION D. CURRENT & POLARITY	A. BUCKING B. DEPOSITION SIZE EL. NO. TYPE AMP. V. C. TOTAL WELDING TIME & INTER PASS TEMPERATURE	A. A. 80° SV B. 3/16" Grinding C. 4.20-4.47 tn D. .47-.65 S1 E. .008-.011	A. Not given B. Seal bead- C. 5/32" 1a 110-140 D. 24-25 E. 8 3. 1/4" 1a 190-250 F. 28-28	A. None B. None	1 1700	1 12 1/2	P									

IDENTIFICATION	ELECTRODE DATA		JOINT DESIGN		WELDING		PROCEDURE		TEST		BALLISTIC RESULTS		REMARKS ON CRACKING			
	A. PLATE THICKNESS	B. TYPE	C. CARBON CONTENT	D. IRON	E. PROCESS	F. HEAT TREATMENT TEMP.	G. TIME QUENCH	H. INCLUDED ANGLE, ROOT FACE	I. COATING	J. PLATE PREPARATION	K. DEPOSITION SIZE EL. NO.	L. TYPE AMP. V.	M. PASSES	N. LOC. OF A CRACKING	O. TYPE ANT.	P. LOC. C. B.
A. 375 B. 4 1/2, 3/4" C. XW-197-F D. Chevrolet E. Crucible F. Steel Co. G. Motor H. Chevrolet I. Water J. Air K. Armored L. Mn M. T102 N. DC-REV	A. 1 1/4" B. R IV C. .900" .765" D. .081% E. .650" .224" F. .27C G. Face 321-331 H. B.O.H. I. 1600F 32 min J. water K. air L. Mn M. T102 N. DC-REV	A. A I B. .10-.11C C. 4.32- D. 4.38Mn E. .39-.71Si F. .08-.018C G. .030-.040P H. 20.0- I. 20.8C J. 10.3- K. 10.7Ni L. 1.00Mo M. Mn N. T102 O. DC-REV	A. 60° SV B. 3/16" C. Grinding	A. Copper B. Seal bead- C. 1 5/32"	A. None B. None	A. 1700 B. 1700 C. 1800	2 1/2" R 2 1/2" R X	10 ⁴ D 8" U 9" U	10 ⁴ D 8" U 9" U	1700 1800 1800	1 1/4" L 1 1/4" L X	IMP IMP IMP	1 12 ²	P		
A. AD 375 B. 4 1/2, 3/4" C. XW-197-F D. Chevrolet E. Crucible F. Steel Co. G. Motor H. Chevrolet I. Water J. Air K. Armored L. Mn M. T102 N. DC-REV	A. 1 1/4" B. R IV C. .900" .765" D. .081% E. .650" .224" F. .27C G. Face 331 H. Back 331 I. B.O.H. J. 1600 F 32 min K. min water L. air M. Mn N. T102 O. DC-REV	A. A I B. .10-.11C C. 4.32- D. 4.38Mn E. .39-.71Si F. .08-.018S G. .030-.040P H. 20.0- I. 20.8C J. 10.3- K. 10.7Ni L. 1.00Mo M. Mn N. T102 O. DC-REV	A. Copper B. Seal bead- C. 5/32"	A. None B. None	A. 1700 B. 1800 C. 1800 D. 1 1/4"	2 1/2" L 2 1/2" L 2 1/2" L 1a 210	5 ¹ ² D 8 ¹ ² U 8 ¹ ² U 2 ¹ ² V	5 ¹ ² D 8 ¹ ² U 8 ¹ ² U V	1800 1800 1800 294	24-25 2 ¹ ² 2 ¹ ² 2 ¹ ²	IMP IMP IMP 3 ¹ ²	P				